ENZYMES: $60 MILLION MARKET BY '65?

Oil, Paint and Drug Reporter

THE CHEMICAL MARKET AUTHORITY

April 25, 1960

OPD SPECIAL
'DEPTH' REPORT
PAGE THREE

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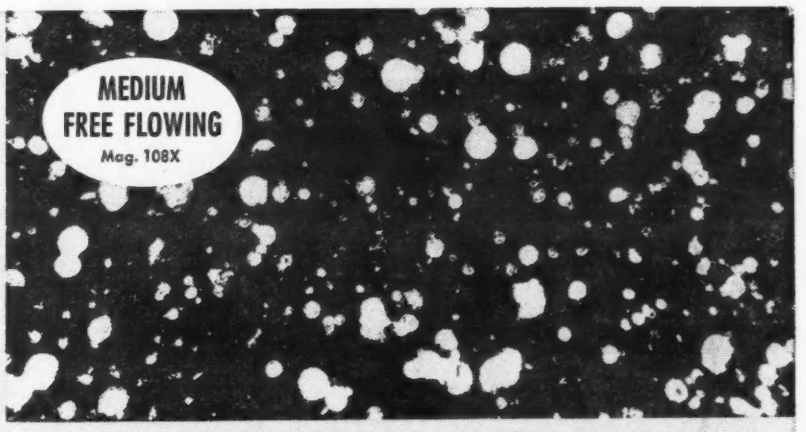

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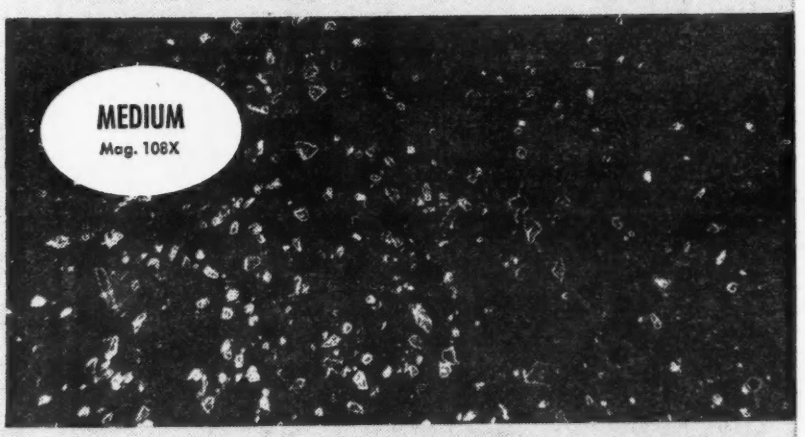

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Oil, Paint and Drug Reporter

Vol. 177 No. 18 30 Church St., New York 7, N. Y. April 25, 1960

ENZYMES OUTLOOK FOR '65

Drugs, Feeds, Foods Spark Optimism

	1965	1960
Pharmaceuticals	$30.0 Million	$12.0 Million
Stockfeed	$7.5 Million	Negligible
Glucose Oxidase	$5.0 Million	$0.5 Million
Other	$17.5 Million	$14.0 Million
Total	$60.0 Million	$26.5 Million

Enzyme Use Seen Spurred By Drugs, Stockfeeds, Foods To $60 Million Volume in '65

OPD Special Report

The industrial enzyme market is likely to more than double in the next five years. This is the feeling of producers, who predict that the race to a sales goal of $60 million by 1965 will be spurred by three key end-uses: pharmaceuticals, stockfeeds and foods. While the pharmaceutical end of the enzyme business is not tremendous on a poundage basis, dollar volume of $12 million at present is expected to grow to $30 million five years hence. Enzyme use in stockfeeds right now is negligible, and feed users have to be convinced they'll benefit, but enzyme producers feel that the next couple of years will show a widespread acceptance of their materials in feeds.

Increases in food use, expected in the glucose oxidase field, could prove dramatic within the next two years, let alone within the next five. Sales, reckoned at $550,000 now, could rocket to more than $1 million before 1962, and could surpass $5 million in 1965.

Importance of Pharmaceutical Uses

How important are enzymes in the pharmaceutical field? Linus Pauling opines that when we understand enzymes we shall understand life. How close science is to understanding enzymatic action is moot. But in the drug field, employment of enzymes for new uses has accounted for a 25 percent per annum growth during the last three years.

These biochemical catalysts have long been employed pharmaceutically as digestive aids, and have been derived from vegetable (papain, ficin, bromelain), animal (pancreatin) and microbiological (A. oryzae, etc.) sources.

More recently, enzymes have been used in medicines to clear up burns, bed sores and chronic ulcers, to dissolve intravascular blood clots, supply enzyme-deficient geriatric patients.

Research proceeds apace on the function of enzymes in the human body. A late development: research at Tufts University medical school linking enzymes (elastase) to artery diseases.

Enzymes have become so important in pharmaceutical research and development that they are considered the most exciting field today.

Not far behind in interest is the stockfeed potential for consumption of enzymes. Addition of microbiological enzymes to stockfeeds has been carried on experimentally for some time.

In February, enzyme producers got a shot in the arm when the Department of

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PAPAIN IMPORTS

1960	*400,000 lbs.
1959	442,643 lbs.
1958	318,073 lbs.
1957	260,264 lbs.
1956	246,022 lbs.
1955	342,508 lbs.
1954	700,640 lbs.
1953	505,368 lbs.
1952	282,412 lbs.

*Industry Estimate

Source: Tariff Commission

Koppers Will Increase Its Capacity To Make Polyethylene at Port Arthur

Koppers Company will add 14 million pounds annual capacity to its Port Arthur, Tex., conventional polyethylene plant. The expanded facility, when completed the latter part of this year, will be capable of producing 46 million pounds annually of low- and medium-density polyethylene. Cost of the expansion, according to Fred C. Foy, president and chairman of the Pittsburgh, Pa., company, will be $4.5 million. Mr. Foy, who spoke before the New York Society of Security Analysts last week, said that Koppers plans to put $20 million into capital expenditures this year.

DIRECTOR OF SALES: John C. Esher, appointed director of sales for its plastics and coal chemicals division by Allied Chemical Corporation, New York. He had been assistant general sales manager of plastics and resins.

Seventy-five percent of the company's spending will go into chemical operations, he said. These include (aside from the polyethylene expansion) a $5 million expenditure on research laboratories now being completed at Monroeville, Pa., and a $3 million investment in a styrene plant.

A Joint Effort

The latter venture is a joint Koppers-Sinclair Refining Corporation effort. A plant will be built by a subsidiary of the two companies alongside the Sinclair refinery at Houston, Tex. (OPD, 2/8/60).

Mr. Foy predicted that Koppers' sales in 1960 would hit $300 million. Sales were $241 million in 1959, compared with $260 million in 1958. The steel strike in the latter part of '59 bit sharply into profits, Mr. Foy noted.

The Koppers president recalled that when he had come before the analysts in

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Sun Naphthalene? The Rumors Persist

Sun Oil Company appears to be taking a more positive stand on rumors that it will build a 100-million-pound petroleum naphthalene plant. Latest word from the company, however, heard at last week's stockholders meeting, is more a "teaser" than a confirmation.

Officially mum until now, the Philadelphia company has disclosed plans to expand further in a number of petrochemical lines. But whether naphthalene is among them is not revealed.

Nor has the company decided whether the new petrochemical ventures will be on its own or in affiliation with other companies. Sun is now linked with Olin

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Freeport, Cuba at Impasse, But Talks Are Continuing

Negotiations between Freeport Nickel Company and the government of Cuba to reopen the Moa Bay nickel and cobalt plant are still at an impasse, but the company has not given up hope that in accord will be reached. That's the word from J. C. Carrington, vice-president of Freeport Sulphur Company, the parent firm.

Immediately following the company's move to end operations at the mine (OPD, 3/14/60), the Cuban government initiated talks with Moa Bay Mining Company, a subsidiary of Freeport Nickel which was organized for the Cuban venture.

According to Mr. Carrington, Cuban of-

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Tesco Unwraps Facility

Tesco Chemicals, Inc., Atlanta, Ga., has just unveiled a new plant, its fourth, located at Edwards, Miss. The facility will produce water purification, refrigeration and sewage treatment chemicals. Included along with a manufacturing building is a 10,000-square-foot warehouse.

Kaiser Unit, Fed by Dow, Opens Up Periclase Output

A new periclase plant has been put on stream at Midland, Mich., by Kaiser Refractories & Chemicals, a division of Kaiser Aluminum & Chemical Corporation. When running at full tilt, the unit will produce 45,000 tons of periclase and refractory grade magnesias yearly and employ about forty people.

Total cost of construction, which got

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Rohm & Haas Weighs Acrylics at Louisville

Rohm & Haas Company is thinking of producing acrylic monomers and polymers at the Louisville, Ky., butadiene plant it has acquired from the government.

The Philadelphia chemical maker says there's nothing firm yet about its plans. However, it adds, whatever is decided, new construction will be needed.

The building program is expected to take more than a year and production operations at Louisville are not likely to begin before the summer of 1961.

Preliminary details of what will be done with the facility were disclosed as Rohm & Haas took possession of the Louisville property last Friday (April 22).

Winner over five other firms with a bid of $6.1 million, R&H now has a 139-

—Continued on page 45

NEW MANAGER: William C. Kay, named general manager of elastomer chemicals for the explosives department of E. I. duPont de Nemours & Co., Wilmington, Del., as of May 1. He had been assistant general manager of the organic chemicals department.

Quinine Disposal at Better Price: GSA's Hope

General Services Administration has begun reconsidering plans for disposing of surplus stocks of quinine in the national stockpile with hope—but no real assurances—of coming up with a scheme that will net the government a better price than the 7 cents an ounce offered by industry several months ago (OPD, 1/25/60).

Last week, a task force of drug industry representatives met with the GSA and the Business & Defense Services Administration to discuss the problem of surplus quinine stocks, totaling some 13,860,000 ounces, plus a small quantity of totaquine.

It was the consensus of the group that the sale of the hydrochloride and sulfate powders be made as one contract on an open bid basis, but that deliveries be spaced over a period of years, sufficient to reduce the impact of the disposal on world markets.

It was also recommended that the dosage forms be sold separately since deterioration is an important factor with this material. It is estimated that about 20 percent of the total supply is in the dosage form.

Indications are that GSA may have to depend upon industry's taking the material off its hands. After rejecting the offers of last January, the agency thought there might be an outlet for the quinine through the mutual security program of the International Cooperation Administration.

It is understood, however, that ICA's interest in the material was practically nil. For one thing, it is questionable whether

—Continued on page 43

Lead and Zinc Subsidy Policy Won't Soften at White House

Administration opposition to going back to the policy of subsidizing the production of lead and zinc shows no signs of softening, in spite of appeals by the mining state members of congress. The Department of the Interior last week told congress that it firmly opposes subsidies for small lead and zinc producers and will continue to support the import quota plan of providing relief for the industry. The policy of the government was announced to the house interior committee by Royce A. Hardy, assistant Secretary of Interior for minerals.

Mr. Hardy said that "by and large, the quotas are doing the job that they were meant to accomplish." He was opposed to subsidies because they would encourage production and lower prices.

Several Bills Under Consideration

The committee has several bills under consideration for payment of direct subsidies to small producers when the price of lead falls below 17 cents a pound and the price of zinc below 14.5 cents a pound.

Only those miners would be eligible for payments who produced 5,000 tons or less annually.

Mr. Hardy said that zinc prices have risen 30 percent and production 40 percent since the quota system was instituted over a year ago.

He conceded, however, that this was not due entirely to operation of the import controls, but was due in part to increased use of zinc.

"The recovery would not have come so soon, however, and would not have carried so far in the absence of quotas," he said.

With respect to lead, Mr. Hardy added that the picture is not as encouraging, but he predicted that it would improve if the quota system is continued.

He said that foreign producers have curtailed their production of lead, which would lead to an increase in domestic prices and increase in domestic production.

3M Sets Up Its Antenna In the Broadcast Field

Can an ill-starred broadcasting network—which has changed hands five times in as many years, losing money much of the time—find prosperity and profits as the adopted child of a blue-chip, highly-diversified corporation, best known to readers of this publication as a chemical maker.

The network is Mutual Broadcasting System, New York; its new owner is Minnesota Mining & Manufacturing Company, St. Paul, Minn. The adoption papers were signed last week.

Tune in next week and find out.

Chemicals Off Slightly Overseas in February

Foreign trade in chemicals and allied products stumbled in February, but still ran ahead of the February, 1959, mark. In a preliminary estimate, Census Bureau tabs the total at $151.9 million, down from January's $157.3 million, but a stride ahead of last February's $144 million.

Chemical imports increased in February, but not enough to offset the decline in exports. The bureau estimates exports of chemicals at $121.2 million in February as compared with $132.9 million in January and $116.7 million in February, 1959. Imports during the month were $30.7 million; in January $24.4 million, and in February last year, $27.3 million.

The decline in chemical exports for February occurred while exports of all commodities generally were moving up slightly. The bureau estimates total ex-

—*Continued on page 70*

National Casein Expands Its Laboratory Facilities

An expansion of laboratory facilities at its Riverton, N. J., plant has been reported under way by National Casein Company. A 25 percent increase in testing equipment and a 50 percent hike in laboratory personnel is already accomplished, the Chicago-based company states.

The expansion is said to be part of a long-range plan to provide increased services to woodworking customers.

Glidden Is Set to Build A Paint Factory in Texas

Glidden Company, selling more and more paint throughout the southwest, has decided to put up a factory in a Dallas, Tex., suburb so that it will have its production source closer to the demand. Construction is expected to get under way within six months.

The plant will cost about $2 million and will be built on a thirty-four-acre site in Carrollton. It is being designed for an initial production capacity of upwards of 200,000 gallons a year.

The new plant will serve as headquarters for Glidden's entire southwestern region, which includes Texas, New Mexico, Louisiana and Mississippi. However, production will continue at the company's present New Orleans, La., plant which has been furnishing most of Glidden's Texas and New Mexico requirements.

The new plant is being designed to produce the full line of Glidden consumer paints and lacquers and industrial products, including special maintenance finishes for oil field equipment and the chemical industry.

The Week's Price Changes

Castor Oil, Sandalwood Oil, Dillweed Oil Advanced. Citral, Coconut Oil, Corn Oil, Lard, Lemon Oil Reduced.

Prices Advanced

Castor oil, No. 1 Braz, ¼c. per lb. (p. 59).
Dillweed oil, 50c. per lb. (p. 59).
Grapefruit oil, 50c. per lb. (p. 59).
Sandalwood oil, 75c. per lb. (p. 59).

Prices Reduced

Citral, CP, 15c. per lb. (p. 59).
Coconut oil, crude, ½c. per lb. (p. 64).
Refd., deod., 2c. per lb. (p. 64).
Coconut oil, fatty acid, 2¼c. per lb. (p. 64).
Corn oil, crude, ½c. per lb. (p. 64).
Refd., ½c. per lb. (p. 64).
Corn oil, fatty acid, 1c. per lb. (p. 64).
Copra, $2.50 per ton (p. 64).
Cottonseed oil, fatty acid, 1c. per lb. (p. 64).
Cottonseed meal, $1 per ton (p. 64).
Grease, choice, white, ½c. per lb. (p. 64).
Lard, cash, 3 20c. per lb.
Lemon oil, Messina, 50c. per lb. (p. 59).
Linseed meal, $4 per ton (p. 64).
Nutmeg oil, USP, East Indian, 50c. per lb. (p. 59).
West Indian, 50c. per lb. (p. 59).
Peanut oil, crude, ½c. per lb. (p. 64).
Refd., ½c. per lb. (p. 64).
Sage oil, Clary, $2.50 per lb. (p. 59).
Soybean oil, crude, ½c. per lb. (p. 64).
Refd., ½c. per lb. (p. 64).
Soybean oil, fatty acid, 1c. per lb. (p. 64).

OPD Price Index

THE OIL, PAINT AND DRUG REPORTER's relative record of prices of chemicals and related materials is currently as follows:

(100=1949 average)

April 22, 1960	April 15, 1960	April 24, 1959
110.36	110.71	110.19

Polypropylene Scores a First

Polypropylene, the versatile plastic, has just scored another first. It has just become the initial container material to receive clearance under the law as a safe substance for packaging food products. The action was taken by Food & Drug Administration under the food additives law and is reported in the April 16 issue of the *Federal Register*, with complete details of the analytical methods of testing. The petition for clearance was filed by Hercules Powder Company, Wilmington, Del., which sells the plastic under the tradename "Pro-fax."

The government order covering polypropylene provides simply that the chemical may be present in food when its presence is in accordance with certain prescribed conditions.

No Tolerance Limits

Unlike other regulations of the agency under the food additives law, no attempt is made to fix tolerance limits on the amount of polypropylene that may show up in the food because scientists as yet have been unable to figure out a way of determining the amount of residue that might be present.

The polypropylene cleared as safe is that manufactured by the catalytic polymerization of propylene and specially prepared as a food packaging grade to meet

—*Continued on page 60*

DIVISION MANAGER: Henry R. Lasman, named manager of the organic chemicals division of National Polychemicals, Inc., Wilmington, Mass.

LPG Pipeline Abuilding, Said to Be World's Largest

A $71 million pipeline, said to be the first designed exclusively for liquefied petroleum gas products, will be built by Mid-American Pipeline Company. Construction is expected to get under way immediately.

The LPG line will cover about 1,800 miles, extending from New Mexico and Texas to the St. Paul and Milwaukee, Minn., areas. Shipping costs are expected to be reduced 50 percent under the cost of rail transportation.

Initial capacity of the line as far as McPherson, Kan., is expected to run about 50,000 barrels daily. Ultimate capacity is rated at 83,000 barrels to the Kansas stop and 85,000 barrels to the combined northern cities.

Hooker Patent Portfolio Offered to Paper Makers

Hooker Chemical Corporation has taken a significant step forward in amplifying its technical service to the pulp and paper industry. The Niagara Falls, N.Y., company has announced that its entire portfolio of US and Canadian patents on pulp bleaching related processing is being made available for licensing without charge.

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ADVANCED: John L. Damon, appointed director of agricultural chemicals for the General Chemical Division of Allied Chemical Corporation, New York. He had been agricultural chemicals sales manager.

Dixon Finally Moving On Hydrofluoric Plant

Dixon Chemical Industries, Inc., finally means to go ahead with construction of a Paulsboro, N. J., hydrofluoric acid plant which the trade first heard about two years ago (OPD, 3/3/58).

Why the project was shelved in the first place is not made clear, but to show that it means business, this week's announcement from Dixon discloses that a construction company has already been signed up for the $3.5 million project.

The builder will be Vulcan-McGraw, a joint venture formed specifically for the job by Vulcan-Cincinnati, Inc., of Cincinnati, Ohio, and F. H. McGraw & Co., Hartford, Conn.

Ground-breaking, says the announcement from Dixon, will take place in the "immediate future," with completion early in 1961.

The unit will be built next to Dixon's 300,000 ton sulfuric acid plant at Paulsboro and will consume 30,000 tons of that output to produce 11,000 tons of hydrofluoric annually.

A co-product, 45,000 tons of high quality anhydrous calcium sulfate, will be marketed to the building trades industry.

Company officials indicate that this will be the first American facility utilizing the Buss process for HF production. The

—Continued on page 70

Boggs Changes Okayed, But Probably Won't Help

Amendments to the Boggs bill, HR 5, designed to make it more palatable to the liberals in the house and to increase its chances of passage, were approved last week by the house ways and means committee.

The changes, however, are not what industry has been hoping for and prospects of the legislation finally being enacted into law are considered remote.

Three modifications are proposed to be made to the bill when consideration is resumed on the house floor, probably within the next two weeks. One change eliminates the provision on the so-called "grossing-up" of foreign and domestic incomes for tax purposes.

Another change limits the tax benefits to investments made in underdeveloped countries, and the third makes firms employing unfair labor conditions abroad ineligible for tax benefits.

The Boggs bill was drafted originally as a major program of granting tax benefits

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Drug Industry Able to Paint A Business Picture of Its Own, Kefauver Probers Are Learning

The Kefauver anti-monopoly committee, painting a dark picture of the American drug industry these past several months, is learning that the drug people can also paint with broad strokes. Last week the brush was in the hands of Dr. Austin Smith, president of Pharmaceutical Manufacturers Association, and, as he testified for the industry while the hearings continued in Washington, he put together a picture that was much different from the one the Kefauver group has been depicting. This is the picture Dr. Smith painted:

- Charges of monopolistic concentration and lack of competition in the drug business are unfounded.
- Allegations that the US industry lacks research leadership and looks to the rest of the world for new drug advances are wholly unsupported by the facts.
- Conclusions that substitution of generic drugs for prescribed brand named products can achieve great savings to the public are open to serious challenge.

Battle of Charts and Interpretations

In what developed largely into a battle of charts and challenged interpretations of what the charts purported to show, the committee wound up its "general" hearings in the price probe and prepared to move back to the "product" series this week, with the inquiry directed at oral and anti-diabetic drugs. Hearings resume tomorrow (April 26).

Three days have been allotted to the hearings, with Dr. E. Gifford Upjohn, president of Upjohn Company, scheduled to take the stand tomorrow (April 26), while John McKeen, president of Chas. Pfizer & Co., will be in the spotlight for Wednesday and Thursday (April 27 and 28).

Dr. Smith returned to the witness stand to complete the testimony he began last February, which was cut short at the time because of the civil rights filibuster in the senate.

He was armed with a dozen or more charts, graphs and exhibits to support industry's argument that conditions are nothing like those which have been pictured.

His documentary evidence was promptly challenged by chairman Estes Kefauver of Tennessee, and John M. Blair, chief economist of the committee. Both Sen. Kefauver and Dr. Smith traded accusations that the other was being unfair, and Dr. Blair read a lengthy statement vigorously defending charts he had placed in evidence at the outset of the hearings, accusing Dr. Smith of "misstating my testimony."

Dr. Smith said that some of the "evidence" given the committee by other witnesses as to amounts spent by companies on promotional activities was completely false. In one case a company had been accused of spending $3.5 million to send literature and samples to 150,000 doctors in October, 1957, but when investigated this turned out to be an expenditure of $180,000 and 6,000 doctors, he said.

"Men from industry, if given the chance, could explain these situations to the committee and it would not have to depend upon unreliable estimates," the PMA president asserted.

Dr. Smith introduced figures into the

—Continued on page 43

Polio Vaccine Unveiled; New Killed-Virus Type

Merck Sharp & Dohme, a division of Merck & Co., Rahway, N.J., has developed a new polio vaccine of the killed-virus type.

In clinical trials the vaccine is said to have produced an immune response in a far higher percentage of children than could usually be achieved with ordinary commercial Salk vaccine. Merck describes the material as extra potent and highly purified.

IN SALES POST: George L. Innes, elected vice-president in charge of sales by Michigan Chemical Corporation, St. Louis, Mich. He had been director of sales and development.

Phosphoric Unit Aims For Fertilizer Season

A new 100,000-ton phosphoric acid plant, billed as the largest in the midwest, has been slated for construction at Marseilles, Ill., by National Phosphate Company. Construction will start immediately.

By completing the unit before year's end, the company plans to have it on stream in time for the next fertilizer season.

Site is a large tract centrally located with frontage along the Illinois River. In addition to the river, the plant will be served by nearby mainline railroad service.

Phosphatic mixed fertilizer, both in liquid and solid form, will comprise the main outlet for the plant's production. But the company's plans include production of industrial chemical derivatives of

—Continued on page 57

Reichhold Has a Material Said to Ease Rosin Squeeze

Reichhold Chemicals, Inc., has come up with a solution for the current shortage of rosin in the paper industry. The company says that its "WETstrez P-685," while improving the water resistance and ink penetration of hard-sized paper, also enables paper mills to reduce the amount of rosin used in a given paper by 40 to 50 percent.

According to a spokesman for Reichhold, the shortage of rosin will not be solved by the expected increase in production of gum and tall-oil rosins.

"WETstrez P-685" is described as a modified acid-curing urea-formaldehyde resin for waterproofing starch-clay coating colors and adhesives.

Orthoxylene Finds Another Producer In Output Parade

Orthoxylene appears to be one of the "hottest" chemicals of the year. Latest company to think so is Cities Service Refining Corporation, which has just fallen in line with a number of other concerns in the big expansion parade.

Cities Service, well aware of the hungry market for orthoxylene overseas (its gets hungrier and hungrier), has decided to put up with a multi-million dollar plant at its Lake Charles, La., installation with the goal of producing 120 million pounds a year.

That figure is expected to be far and above competitive output.

Arrangment for Selling

And, to sell the stuff, Cities Service has just announced from New York headquarters that it has entered into a contract with another big orthoxylene producer, Cosden Petroleum Corporation. The arrangement is for the new plant's production to be sold through Cosden's exclusive agent—Fallek Chemical Corporation, New York.

Basic feed stocks for the new orthoxylene plant will be supplied from present units of Cities Service Refining at Lake Charles.

It's a good-sized parade of orthoxylene makers that Cities Service has joined, and they are producing a lot of material, even though demand in this country would not seem to justify such efforts. The demand abroad, particularly in Japan and Europe, does, however.

Early in the year (OPD, 2/1/60) Cosden proudly told the industry it was planning to move into the lead as the world's biggest producer of orthoxylene. It would boost potential to 70 million pounds annually by early 1961, according to word from the company's home base in Big Spring, Tex.

It wasn't long (two months later) before another big company got into the parade with an announcement. Delhi-Taylor Oil Corporation, not much impressed by Cosden's plans, said it would boost its merchant potential to 70 million pounds—and would be in production before Cosden (OPD, 4/4/60).

The Big Spring firm had picked the first part of next year as its target date,

—Continued on page 48

Pesticides Are All Ready For Battle With the Bugs

Farmers will have nothing to worry about when it comes time to take up their sprayers and do battle with the unending hoardes of insects this year.

The pesticide industry has the production facilities and ammunition ready in adequate quantities to meet any foreseeable emergency. If supplies of one particular item run short, enough satisfactory alternates will be on hand to keep up the fight.

This optimistic view—from the farmers' standpoint—was gleaned from last week's annual pesticide outlook report of the Department of Agriculture for the current marketing year.

Dr. Harold H. Shepard, in charge of the agricultural chemical staff of the Commodity Stabilization Service, who prepared the report, said that the 1959 production figures for all synthetic pesticidal chemicals will not be available for several weeks, but it can be expected to be higher than the 1958 total of 539,396,000 pounds

—Continued on page 43

Chloral Output Rise Planned by Diamond

Diamond Alkali Company will double its production of chloral through an expansion program it is now planning for its facilities at Greens Bayou, Tex.

The Cleveland, Ohio, company says the increase will permit it to continue supplying chloral customers formerly served out of the Newark, N. J., plant. It will also allow an increase in Diamond's production of DDT, which requires chloral for a raw material. The increased facilities are expected to be on stream by July 1.

Fair Trade Legislation Catches Heavy Body Blow

Fair trade legislation, important to many sections of the chemical industry, was dealt a body blow in the house last week when the rules committee decided against clearing the way for consideration of the bill on the floor for passage.

The action virtually dooms the measure for this session, for without rules committee clearance, the bill is conceded very little chance of ever coming up for vote.

The committee had a request before it since the beginning of the session in January that the bill be accorded privileged status on the house bill calendar—but because of strong opposition from many quarters held off the showdown until last week. The vote was unrecorded, but was understood to have been 6 to 4 against, with 2 abstentions.

Sponsored primarily by the retail druggists, the bill was designed to repair the damage that has been done to the retail price maintenance policy of many manufacturers by a series of adverse court rulings. It declared violations of fair trade contracts to be an unfair trade practice.

Opposition to the legislation developed because it had the effect of making the Federal Trade Commission a policing authority over such contracts.

The bill was also criticized on this score because it tended to take away the rights of individual states to determine their own policies on fair trade.

Proponents of the bill offered compromising amendments designed to meet these objections but never were able to convince a majority of the rules committee members that such amendments would result in a law any better than the Miller-Tydings and the McGuire laws now on the statute books.

While there is still a chance that senate proponents might seek to circumvent the

—Continued on page 45

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Dow In the Center Ring

There's a three-ring circus in Washington, D.C., this week, vying for attention with the perennial one on Capitol Hill.

Dow Chemical Company, with most of its 700 chemical wares on display, occupies the main ring. It is flanked on one side by Sandura Company, which has brought along a menagerie of baby animals called the "Sanduran Circus." On the other side is Chrysler Corporation, exhibiting Dow's new line of metallic automobile coatings.

Dow is in town on invitation of the Hecht department stores, which are saluting the Midland, Mich., company for contributions to the conquest of space, and improvements in leisure, travel, decoration and other amenities of modern life.

Major window displays feature Dow products in various industries, including plastics, automotive materials, paint, metals and textiles.

Each day carries a different theme, every one keyed to the bright harmonies of today's gracious living. Fashions. Youth. Sports. Outdoor living. Homemaking. All are seen brightened and heightened under the glaring beacon of chemical progress.

In the exhibit hall of the main store, the first showing of a new concept in automobile paint and finishes shares top billing with the baby animals.

Nearby, a baby elephant is lumbering back and forth over Sandura tile, demonstrating its durability and strength, and also that of the tile.

The automobile paint technique is a joint display of Dobeckmun Company, a Dow Division, and the Chrys-

—Continued on page 71

Drug People, Taught by Kefauver, Set to Become Probers Themselves

The American drug industry, which has been taught something about probing by Sen. Estes Kefauver and his senate anti-monopoly group, is now going to do a little probing itself. Through its Pharmaceutical Manufacturers Association, the industry will undertake a full-scale study of the impact of medicine costs on the public. According to Dr. Austin Smith, president of the association, the full resources of PMA will be thrown into the task.

MOVES UP: William L. Loving, vice-president of Cabot Carbon Company, elected a vice-president of the parent company, Godfrey L. Cabot, Inc., Boston.

"The effort will bring together in one place information which has never been gathered by any source, public or private," he says, and will include facts on:

- The extent of prescription drug use by the general population.
- The segments of the population using drugs and under what circumstances.
- The ways in which drugs are being provided in medical care programs.
- Whether drugs are not available to patients.
- Which elements, if any, of the population may be deprived of necessary drug therapy and the reasons for such deprivation if it exists.
- The true relationship of prescription drugs to medical care needs and costs.

Dr. Smith says representatives of consumer groups and various members of the health team will be asked to assist in the study with a special industry group.

—Continued on page 57

Sutherland Appoints Lane

John Sutherland Productions, Inc., has appointed Cleveland Lane as executive vice-president and a member of the board of directors, effective May 1. Mr. Lane is presently assistant to the president of Manufacturing Chemists' Association.

Farm Chemicals Relieved Of Tolerance Filing to '61

Deadline for complying with the tolerance requirements of the Miller pesticide law was extended until March 6, 1961, for another group of agricultural chemicals brought under the law by last year's amendment covering nematocides, plant regulators, defoliants and desiccants.

Ordinarily, the chemicals would have had to comply with the tolerance require-

—Continued on page 46

Delaney Clause a Contradiction To Intent of the Additives Law, Animal Health Group Is Told

It's time to excise the Delaney cancer clause from the federal food addities law. Far from contributing anything to the law, this clause flatly contradicts its spirit and poses a threat to future progress based on research. That's the opinion of Adrien L. Ringuette, attorney and spokesman for Abbott Laboratories given at last week's North Chicago, Ill., meeting of the Animal Health Institute.

The Delaney clause—which prohibits even safe levels of any substance that can possibly cause cancer—hinders the advance of food technology, Mr. Ringuette thinks. He backs up his opinion by noting "evidence that research projects have already been curtailed and that potential research projects are now being tabled in veterinary medicine."

Hampers Drug Clearances

The clause has prevented further clearances of safe uses for two different drugs long employed as additives to animal feed.

Why, asks Mr. Ringuette, should diethylstilbestrol and organic arsenical compounds—both thoroughly demonstrated to be safe at the levels employed in animal feeds, and approved by the Food & Drug Administration—be barred from further use?

"Diethylstilbestrol," he notes, "cannot be made to cause cancer in most animals . . . and no cancer in humans has been found attributable to it despite its wide medical use in humans for twenty years."

Furthermore, Mr. Ringuette goes on to note, when used in animal feeds, any detectable diethylstilbestrol residue is eliminated before the animals are marketed for food, "so the drug would not enter the human system by this route."

Scientific judgment has been entirely excluded, not only in the evaluation of safety, but also in the evaluation of whether these compounds are even capable of producing cancer, he declares.

Mr. Ringuette's speech ends with a reminder that it is the clause itself, as legislated by congress, and not FDA's administration of it that he's quarreling with:

"In my opinion," says he, "the problem is not basically the administration of the law. In the past we have been able to work out problems of administrative interpretation with the Food & Drug Administration on a scientific basis, and we can probably continue to do so in the future."

CMRA Section to Review Foreign Scene This Week

Foreign operations will get top billing at the spring symposium of the Chemical Market Research Association of Southern California slated to be held this Thursday (April 28) at the Rodger Young Auditorium in Los Angeles.

Subject chosen for the symposium is "Interrelation of Foreign and Domestic Chemicals Industries." Among the papers to be presented are "Foreign Trade Chemicals," by H. Percival Chase, Chemical Manufacturing Company, Inc.; and "Effects of Chemical Imports on Domestic Producers," by Donald G. Ellis, Stauffer Chemical Company.

OUTPUT CHIEF: Herbert D. Thornton, appointed production manager-natural resources for Union Carbide Olefins Company, New York, a division of Union Carbide Corporation.

Parke-Davis Pilgrims Journey to New Lab

Making a pilgrimage to Ann Arbor, Mich., last week for formal dedication of Parke, Davis & Co.'s new research laboratories were an estimated 1,000 stockholders—the largest gathering in the company's history—eager to take a look at their new $13.5 million investment.

Five years in the works from blueprint to start-up, the new facilities have more than doubled the company's potential for research and product development.

At a stockholders' meeting preceding the dedication, Parke-Davis president Harry J. Loynd reported that the company's 1960 research budget of $12 mil-

—Continued on page 70

Synthetic Rubber Facility Of Goodrich Will Expand

With synthetic rubber sales booming in Europe, B. F. Goodrich Chemical Company has decided on an expansion program for its jointly-held Dutch subsidiary, N.V. Chemische Industrie Aku-Goodrich (Ciago), at Arnhem, Holland.

The new facilities are expected to be completed by early 1961. Goodrich owns

—Continued on page 60

Association Meetings

Air Pollution Control Association, annual meeting, Netherland-Hilton hotel, Cincinnati, Ohio, May 22-26.

American Association of Cereal Chemists, annual meeting, Morrison hotel, Chicago, May 1-5.

American Coke & Coal Chemicals Institute, eastern regional meeting, Westchester Country Club, Rye, N. Y., May 16-17.

American Institute of Chemists, annual meeting, Radisson hotel, Minneapolis, Minn., May 11-13.

American Pharmaceutical Association, annual meeting, Shoreham hotel, Washington, D. C., August 14-20.

Armed Forces Chemical Association, annual meeting, Sheraton-Park hotel, Washington, D. C., September 15-16.

Association of Consulting Chemists & Chemical Engineers, annual meeting, Shelburne hotel, New York, October 25.

Association of Food & Drug Officials, annual conference, Baker hotel, Dallas, Tex., June 5-9.

Chemical Market Research Association, annual spring meeting, Biltmore hotel, New York, May 17-18; annual fall business meeting, Pittsburgh Hilton hotel, Pittsburgh, Pa., November 9-10.

Chemical Specialties Manufacturers Association, midyear meeting, Drake hotel, Chicago, May 16-18.

Chemicals In Agriculture Symposium, sponsored by Department of Agriculture, Agricultural Research Center, Beltsville, Md., April 27-29.

Drug, Chemical & Allied Trades Association, annual meeting, Sagamore hotel, Bolton Landing, Lake George, N. Y., September 15-18.

Electrochemical Society, LaSalle hotel, Chicago, May 1-5.

Federation of Societies for Paint Technology, annual meeting, Sherman hotel, Chicago, October 31-November 2.

Flavoring Extract Manufacturers Association, annual convention, Hershey hotel, Hershey, Pa., May 2-4.

Manufacturing Chemists' Association, annual meeting, Greenbrier hotel, White Sulphur Springs, W. Va., June 9-11.

National Agricultural Chemicals Association, annual meeting, Del Coronado hotel, Coronado, Calif., September 27-29.

National Foreign Trade Council, national meeting, Waldorf-Astoria hotel, New York, November 14-16.

National Paint, Varnish & Lacquer Association, annual convention, Drake hotel, Chicago, October 27-29.

National Plant Food Institute, annual convention, Greenbrier hotel, White Sulphur Springs, W. Va., June 12-15.

Parenteral Drug Association, scientific meetings, Warwick hotel, Philadelphia, April 29.

Parenteral Drug Association, Edgewater Beach hotel, Chicago, June 24; annual convention, Statler hotel, New York, October 19-21.

Pharmaceutical Manufacturers Association, eastern regional meeting, Waldorf-Astoria hotel, New York, December 12-14.

Proprietary Association, annual convention, Greenbrier hotel, White Sulphur Springs, W. Va., May 15-18.

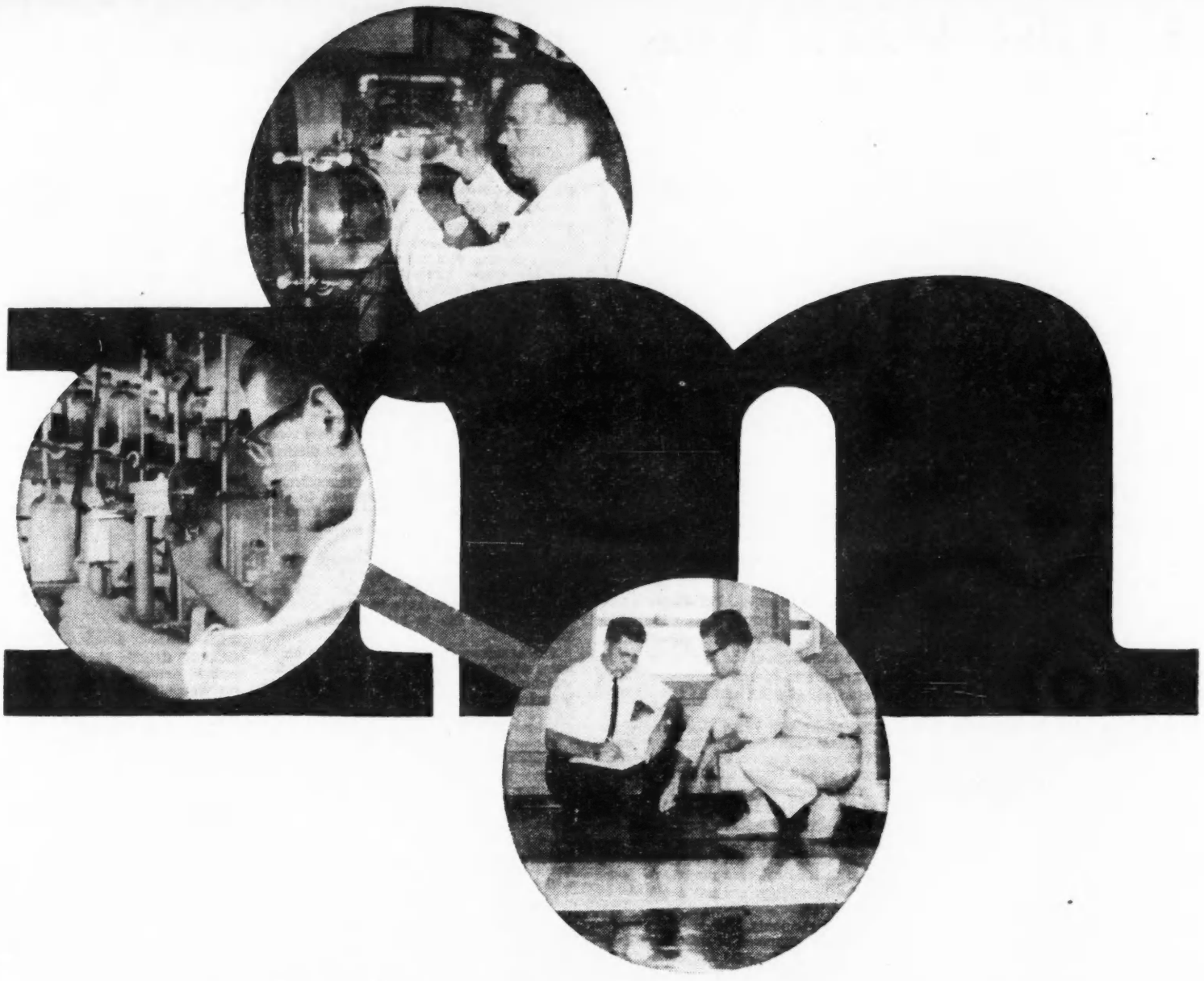
Rutgers Pharmaceutical Conference, New Jersey State University, New Brunswick, N. J., May 11.

Society of the Plastics Industry, Canadian sectional conference, London hotel, London, Ont., April 25-26.

Society of the Plastics Industry; national conference and annual meeting, Americana hotel, Bal Harbour, Fla., May 11-13.

Synthetic Organic Chemical Manufacturers Association, spring outing, Shawnee Inn, Shawnee-on-Delaware, Pa., May 11-13.

Toilet Goods Association, scientific section, spring meeting, Waldorf-Astoria hotel, New York, May 11; annual meeting, Poland Spring House, Poland Spring, Maine, June 27-29.



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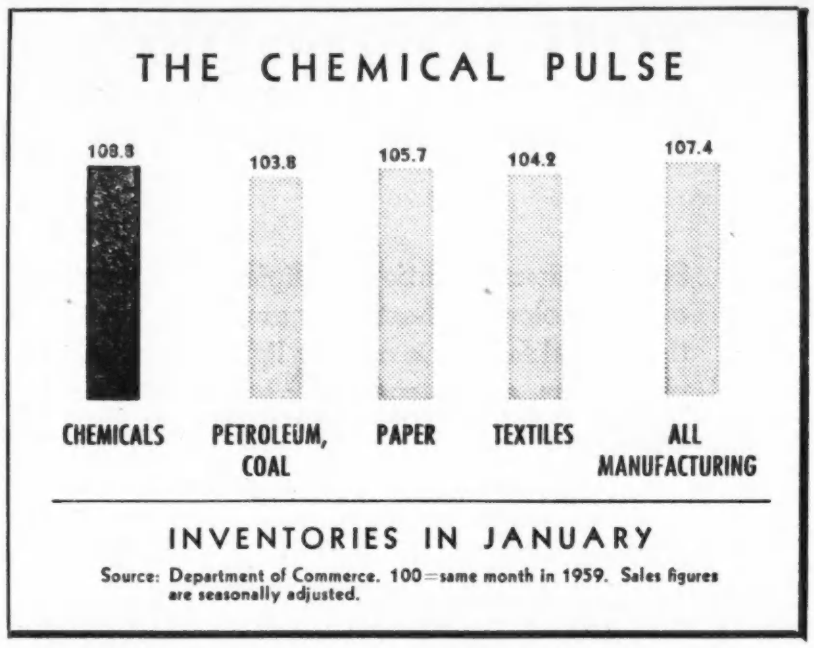

UN Build-Up Ideas

Six months from now, the United Nations will be fifteen years old. Plans for the observance of that anniversary were discussed basically last week by the United States Committee for the United Nations, an organization reported to have 130 "members"—with no published definition of that term.

Others are looking at UN with ideas other than birthday-celebrating in mind. One group, said to consist of "prominent Americans," favors revision of the UN charter that would make it possible to set up in the organization's functioning an "enforceable world law." The idea, assumably, grew out of dissatisfaction with the US senate's indefinite postponement of consideration of a resolution that would repeal the Connally amendment, under which the United States reserves a veto over World Court jurisdiction in any case in which this nation is a party. The group would have the United States grant compulsory jurisdiction to the World Court in disputes between it and other NATO members.

On another aspect, a US Senator told the audience in a New York town a month ago that the forthcoming East-West summit conference, which "appeared to be headed for the disillusionment of the 1955 top-level talks in Geneva," would offer "greater prospects for peace if it were held under UN auspices."

In a recent social service poll, the majority opinions were reported to be in favor of giving UN power to tax member states for support of its agencies; to control outer-space exploration and prevent the use of space for military purposes; to decide disputes between nations in UN courts or in the World Court; to have a police force which would enforce the courts' decisions, and to implement a plan of world disarmament.

Behind—or beneath—all the suggestions for build-up is a belief that the most important need in UN reform is for something that will change it in all important respects from a dictatorship to a democracy. But, it will take a lot of charter-revising, practicably impossible even to get started, to get rid of the privilege that permits one member's veto to block action expressly desired by all other members.

Getting Down to Earth

No doubt, it borders very closely upon heresy in these days of spending millions to get a man up to the moon to opine that humanity would be much better served if the political, technical and other efforts on transportation were brought down from universal or celestial outer space to the municipal outer space commonly called suburbia. But, there is a bigger national economic need in this country for the providing of satisfactory transportation for the commuter than there is for any measure of such service for the astronaut.

The problem is a business one; it should be taken out of the hands and policies of politics except to the extent that rail service be given as much of a handout from taxpayers' money as is given to competitive methods by way of governmentally constructed and maintained highways. Railroading is a business. It should be treated as a member of the general business fraternity by the other members whom it serves.

No doubt, that also borders upon heresy. But, it is the only way in which private enterprise can measure up fully to its functional responsibilities.

It must be admitted that the proper appreciation of railroad service as an essential component of business operations presents a number of difficulties under today's—or is it yesterday's?—methods of economic thinking. But, there is a clear potentiality for modernization in all aspects of the problem; be they commuter or cargo. It would be good for business all around in many ways to get going somewhere in the general area.

Chemistry for Defense

There is very much for the chemical profession and the chemical industry to study most thoughtfully in what was disclosed by a panel of seven governmental experts on chemical, biological and radiological warfare at a symposium sponsored by the American Chemical Society a little more than a fortnight ago. Much is known about the agents covered by developments in that area of potential "international relations." Very little is known with reference to even limitedly effective means of defense against such destructive agents. It is the general opinion of those who are studying modern methods of mass human destruction that a fully developed and implemented program of retaliative ability is quite potentially effective in dissuading others from attacking this country.

That is one of the common psychological doctrines of international peace and security which can easily be reduced to nothingness by even a verbal mishap. The best means of confidential assurance is that direction lies in being able to detect such attacks at or near the launching status and to set up an effective defensive operation with protective and remedial agents and equipment. That is the objective for which the chemical profession and the chemical industry should be seriously devoting every possibly available capacity and facility.

Because the destructive potentialities of biological agents are far greater than those of chemical agents in modern military munitions, the imperative need is for the development to full efficiency of civil defense systems capable of immediate and effective application to combat bacteria, fungi, protozoa, rickettsiae and numerous viruses. Primarily of necessity is, of course, a dependable system of detection. Germicidal activity must be adequately developed for prompt, effective application.

The chemical industry should make every possible effort to see that the demands of effective defense against chemical, biological and radiological warfare get a full measure of the consideration that they deserve at the Military-Industrial Conference on United States Economy in a World Conflict, sponsored by the Institute for American Strategy and the Office of Civil & Defense Mobilization, which gets under way today and continues through Wednesday (April 25 to 27) at the Sherman hotel, Chicago. The announcement says that "every topic on the program has a bearing on non-military defense"—a project in which chemistry in all its aspects has a pre-eminent role and an imperative responsibility.

OPD'S BOOKSHELF

Pesticidal Techniques

The third edition of HANDBOOK OF PEST CONTROL* brings the war against pests up to date. Like its predecessors, it puts the spotlight on every theater of operations from the home to the factory. On the sound theory that you must know your enemy, the author closely describes such pest characteristics as habits, entomological types, characteristic diseases carried, manner of infestation, diet, reproduction.

Held under the author's microscope and condemned to die by the latest chemical means are rats and mice, silverfish, cockroaches, termites, decay fungi, bedbugs, clothes moths, ants, lice, spiders, mites, ticks, bees, carpet beetles and a myriad other offensive creatures.

Regarded in the industry as an authoritative reference work, the handbook contains some 250 illustrations in this edition. The need to keep pace with the latest chemical combatants and techniques makes it a must for this volume to replace edition No. 2 on industry shelves.

*HANDBOOK OF PEST CONTROL. By Arnold Mallis. 1,132 pages. MacNair-Dorland Company, New York. $12.50.

Washington Talks It Over

Drug Makers' Lot Is Not a Happy One These Days: First There Was the Business of Kefauver And Now There Is the Problem of Where to Stand on the Help-for-the-Aged Question.

By Ralph L. Cherry
Washington Editor

Drug manufacturers face the dubious distinction of having to make a decision in the upcoming Presidential and congressional political campaigns that few, if any, other industrial groups need contend with.

To the drug producers, already plagued by the price probing of Sen. Estes Kefauver, there now falls the unhappy burden of deciding whether in the interests of more business for their companies, they should support the Forand-type scheme of federal hospitalization care for the aged, or whether as a matter of principle, such schemes must be opposed as being a step towards socialized medicine.

All the rowing and discussion in and out of congress now over compulsory schemes of hospitalization are little more than a build-up to making this one of the hottest issues of the coming campaign.

In deciding whether to support or oppose this form of federal aid, drug manufacturers will recall the studies made of federal medical activities by the first Hoover Commission. Some of the things it found were:

- To have his tonsils removed, a patient was staying an average of 16.1 days in an Army hospital; 15.1 days in a Veterans hospital; 6.8 days in a Public Health Service hospital, and only 1.4 days in a private hospital.
- The average stay for an appendectomy ranged from 20.3 days in a Navy hospital to 7.8 days in a private hospital.
- Federal hospitals were giving so much convalescent care that up to 85 percent of the patients in one military hospital were ambulatory.

These matters were uncovered by the commission twelve years ago, and although reforms were recommended, little if anything has been done in the meantime.

The wide gap between the federal view and the private medical view of what constitutes proper treatment raises the question whether the criterion for good care is keeping a patient in the hospital for an extended stay.

Under the Forand bill, 13 million social security beneficiaries—11 million retired persons and 2 million children—would be eligible for government-paid hospital care. With hospital rooms already limited, a system of priorities for hospital beds could become an absolute necessity.

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Current MARKET Quotations

Unless otherwise indicated, listings are first-hand quotations prevailing, according to information and belief, April 22 on large lots, f.o.b. New York, with the lowest in the left-hand column and the highest in the right-hand column. The listings do not represent bid and asked prices nor a range over the week. Differences between high and low may be accounted for by differences in quantity, quality, locality, or individual suppliers' views. An index to the weekly market reports is to be found on page 4.

A

Abies siberica oil, ens. ..... lb. 1.90 - 2.40
Acacia (see Arabic gum).
Acenaphthene below 92.5 C. m.p., dms., works lb. .40 - —
Above 92.5 C. m.p., bbls., dms., works lb. .41 - .50
Acetaldehyde 99%, dms., c.l., works. lb. .12 - —
dms., l.c.l., works ..... lb. .13½- —
tanks, works ..... lb. .10 - —
Acetaldol (see Aldol).
Acetanilide, tech., flaked, bbls., bgs., c.l., frt. alld lb. .32½- —
bbls., bgs., ton lots, frt. alld. lb. .33½- —
bbls., bgs., smaller lots, frt. alld lb. .36½- —
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70%, bbls. ..... 100 lbs. 9.95 - —
80%, bbls. ..... 100 lbs. 10.45 - —
Acetic acid, glacial, syn., CP, dms., dlvd. 100 lbs. 22.00 -23.00
tech., dms., c.l., dlvd. 100 lbs. 13.75 - —
dms., l.c.l., dlvd ..... 100 lbs. 15.25 - —
tanks, dlvd. ..... 100 lbs. 10.00 - —
USP, cbys., dlvd ..... 100 lbs. 31.00 -32.00
Acetic anhydride, aluminum ret. dms., c.l., dlvd. E lb. .16½- —
aluminum ret. dms., l.c.l., dlvd. E. lb. .18 - —
tanks, dlvd. E. ..... lb. .14 - —
Acetoacetanilide, fib. dms., c.l., dlvd lb. .80 - —
fib. dms., l.c.l., dlvd ..... lb. .81 - —
Acetoacet-o-chloroanilide, fib. dms., c.l., dlvd lb. 1.35 - —
fib. dms., l.c.l., dlvd ..... lb. 1.36 - —
Acetoacet-o-toluidide, fib. dms., c.l., dlvd lb. .82 - —
fib. dms., l.c.l, dlvd ..... lb. .83 - —
Acetone, CP, dms., c.l., dlvd. lb. .11 - —
dms., l.c.l., dlvd ..... lb. .12½- —
tanks, dlvd. ..... lb. .08½- —
Acetonitrile, dms., c.l., t.l., dlvd lb. .35 - —
dms., l.c.l., dlvd ..... lb. .36½- .37
tanks, dlvd. ..... lb. .32 - —
Acetophenetidin, USP, 200-lb. dms., 1,000 lbs., frt. alld lb. 1.22 - —
100-lb. dms., 1,000 lbs., frt. alld. lb. 1.24 - —
Acetophenone, cns., dms ..... lb. .42 - 1.30
Tech., dms., c.l., works ..... lb. .37 - —
dms., l.c.l., works ..... lb. .37¾- —
tanks, works ..... lb. .35 - —
N-Acetyl-p-aminophenol, dms., t.l. (min. 23,000 lbs.), frt. adjusted lb. 1.24 - —
dms., smaller lots, same basis lb. 1.35 - 1.63
dms., 5,000-lb. lots, same basis lb. 1.30 - 1.45
Acetylene black, imp., bgs., c.l., duty and freight extra lb. .19 - —
cs., l.c.l., ex whse ..... lb. .24½- .30
Acetylene tetrabromide, 16-dm. lots or more, f.o.b. works lb. .53 - —
Acetylsalicylic acid, USP, special, makers, primary distr., bbls., 1,000-lb. lots, point of shipt. lb. .63½- —
USP, standard, fine, cryst., gran., (20-40 mesh) powd., (80 mesh.) 250-lb. bbls., c.l., t.l., same basis lb. .55¼- —
Freight equald, shipt. identical quantity over standard routes, from N.Y., Phila., Midland, Mich., Chicago and St. Louis.
Acetyltributyl citrate, tech., non-ret. dms., c.l., frt. alld. E. of Denver lb. .35½- —
non-ret. dms., l.c.l., frt. alld. E. of Denver lb. .36½- —
tanks, frt. alld. E. of Denver. lb. .33 - —
non-ret. dms., c.l., frt. alld. E. of Denver lb. .39½- —
non-ret. dms., l.c.l., frt. alld. E. of Denver lb. .40½- —
tanks, frt. alld. E. of Denver. lb. .37 - —

ACIDS

Acid quotations are listed individually. For example, prices on Acid, cresylic, may be found in the C's under Cresylic acid.

Aconite root, bls. ..... lb. .50 - .55
Acrolein, tech., dms., c.l., works lb. .51 - —
dms., l.c.l. works ..... lb. .51¾- —
tanks, works ..... lb. .46 - —
Acrylamide, dms., t.l., f.o.b. works. lb. .58 - —
dms., l.t.l., same basis ..... lb. .60 - —
Acrylic acid, glacial, dms., c.l., t.l., frt. alld lb. .57 - —
dms., l.c.l., l.t.l., frt. alld .. lb. .58 - —
Acrylonitrile, dms., c.l., t.l., frt. equald lb. .26 - —
dms., l.c.l., l.t.l., frt. alld ..... lb. .27 - —
tanks, frt. equald ..... lb. .23 - —

Abies Siberica Oil—Ammonium Bicarbonate

Adeps lanae (see lanolin).
Adipic acid, bgs., c.l., dlvd. ..... lb. .32¼- —
bgs., l.c.l., dlvd. ..... lb. .33 - —
Agar, USP, Kobe No. 1, strip, bls. lb. 2.40 - 2.50
powd., 30 mesh., fib., dms lb. 2.40 - —
dl-Alanine, dms., 100-lbs. or more, f.o.b. works lb. 5.25 - —
dms., 1-99 lbs., same basis ... lb. 10.00 - —
Aldol, 95%, dms., l.c.l., works lb. .28 - —
Aldrin, tech., fib, dms., c.l., t.l. dlvd lb. .99 - —
fib. dms., l.c.l., dlvd. ..... lb. 1.04 - —

ALCOHOLS

Alcohol quotations are listed individually. For example, prices on Alcohol, furfuryl, may be found in the F's under Furfuryl alcohol.

Aletris root, bgs ..... lb. 1.50 - 1.75
Algin (see Sodium alginate)
Alizarin (see 1,2-Dihydroxy anthraquinone).
Alkali blue dry, 250-lb. bbls., dlvd. E. of Rockies lb. 2.38 - —
Alkali blue, toner, litho flushed, 125-lb. bbls., same basis, lb. 1.35 - —
Alkali blue prices 1c. higher W. of Rockies.
Allethrin, 90%, dms., frt. alld lb. 28.80 -28.90
Soln., 20%, dms., 200-2,000 lb. lots, frt. alld lb. 6.50 - 6.55
2½% dms. frt. alld. ..... lb. .95 - 1.10
Allspice oil (see Pimento oil).
Allyl alcohol, dms., c.l. dlvd. ..... lb. .32½- —
dms., l.c.l., dlvd. ..... lb. .34 - —
tanks, dlvd. ..... lb. .30 - —
Allyl bromide 55-lb. cbys. 5,005 lbs. or more, works lb. 1.47 - —
55-lb. cbys., 1,045 to 4,950 lbs., works lb. 1.52 - —
55-lb. cbys., 55 to 990 lbs. works. lb. 1.57 - —
Allyl chloride, dms., c.l., dlvd ... lb. .17½- —
dms., l.c.l., dlvd ..... lb. .19 - —
tanks, dlvd. ..... lb. .15 - —
Allyl isothiocyanate (see Mustard Oil, syn.).
Almond oil, artif., bitter (see Benzaldehyde)
Almond oil, nat., bitter, f.p.a., bots. lb. 2.75 - 3.45
NF, bots. ..... lb. 3.00 - 3.30
sweet, USP, cns., dms ..... lb. .70 - 1.30

Abbreviations

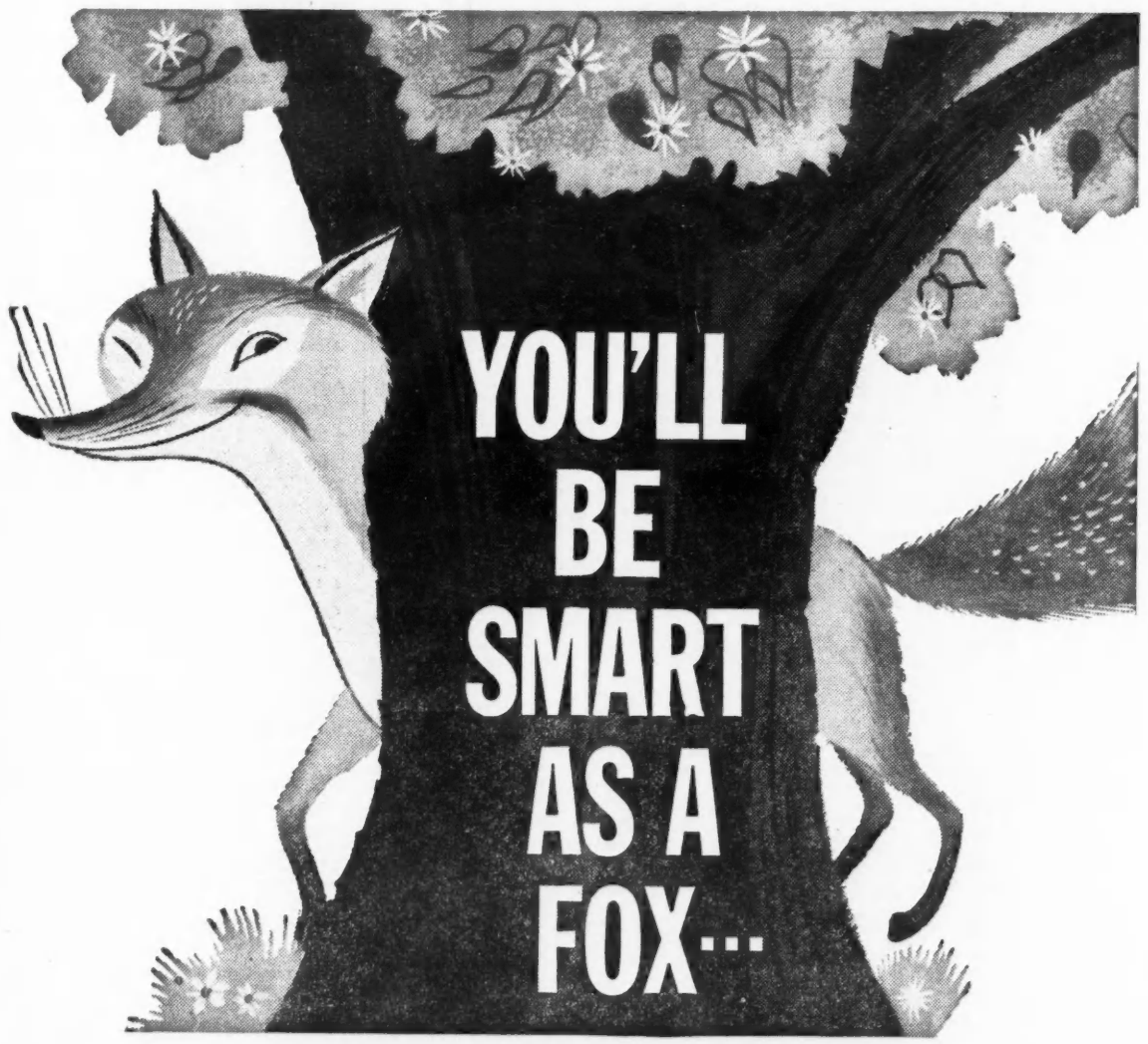
Used in OPD Market Quotations

alld.	allowed	distr.	distributor	No.	number
amorph.	amorphous	djns.	demijohns	nom.	nominal
AMP	American melting point	dlvd.	delivered	o-	ortho
anhyd.	anhydrous	dms.	drums	ord.	ordinary
AOAC	Association of Official Agricultural Chemists	dom.	domestic	oz.	ounce
		E.	east	p-	para
		e.p.	end point	Pac.	Pacific
a.p.a.	available phosphoric acid	equald.	equalized	pf.	proof
		exp.	expressed	phos.	phosphate
approx.	approximately	Ext.	external	photo.	photographic
artif.	artificial	F.	fahrenheit	pkgs.	packages
ASTM	American Society for Testing Materials	ferment.	fermentation	powd.	powdered
		f.f.a.	free fatty acid	precip.	precipitated
		f.f.c.	free from chlorine	prod.	producer
Atl.	Atlantic	fib.	fiber	pt.	point
Be.	Baume	f.o.b.	free on board	pulv.	pulverized
bbls.	barrels	f.p.a.	free of prussic acid	purif.	purified
bgs.	bags	frt.	freight	redist.	redistilled
bls.	bales	gal.	gallon	refd.	refined
bots.	bottles	gran.	granular	refy.	refinery
b.p.	boiling point	grd.	ground	reg.	regular.
b.p.l.	bone phosphate of lime	i.&a.	iron and aluminum	resub.	resublimed
				ret.	returnable
b.r.	boiling range	i.b.p.	initial boiling point	SD	specially denatured
bxs.	boxes	imp.	imported		
C.	centigrade	incl.	included	s.d.	single distilled
cbys.	carboys	indust.	industrial	S.E.	southeast
CD	completely denatured	kgs.	kegs	sec.	secondary
		l-	laevo	secs.	seconds
c.i.f.	cost, insurance, freight	lacq.	lacquer	s.g.	specific gravity
		lb.	pound	shipt.	shipment
cks.	casks	l.c.l.	less carlots	soln.	solution
c.l.	carlots	l.t.l.	less truckload	s.u.	standard unit
cns.	cans	liq.	liquid	syn.	synthetic
coml.	commercial	mfrs.	manufacturers	tanks.	railroad tankcars
conc.	concentrated	m-	meta	tech.	technical
CP	chemically pure	m.a.p.	mixed aniline point	tert-	tertiary
cps.	centipoises			t.l.	truckloads
cryst.	crystalline	min.	minimum	t.w.	tankwagons
cs.	cases	m.p.	melting point	USP	U. S. Pharmacopoeia
ctns.	cartons	N-	nitrogen		
cyls.	cylinders	n-	normal	vis.	viscosity
d-	dextro	nat.	natural	VM&P	varnish makers & painters
dbl.	double	neut.	neutral		
denat.	denatured	NF	National Formulary	W.	west
dest-dist.	destructively—distilled	NNR	New and Nonofficial Remedies	whse.	warehouse
dl-	dextro-laevo			w.w.	water-white
dist.	distilled				

A unit-ton is 2,000 pounds of 1 percent of the basic constituent or other standard of the material. The percentage figure of the basic constituent multiplied by the price figure shown gives the price of 2,000 pounds of the material.

Aloe, Cape, cs. ..... lb. .30 - .33
powd., cs. ..... lb. .60 - .65
Curacao, kgs. ..... lb. .60 - .70
powd., kgs. ..... lb. .80 - —
Aloin, USP, bbls., dms., kgs .... lb. 3.25 - 3.75
Alphanaphthol (see a-Naphthol).
Alphanaphthylamine (see a-Naphthylamine).
Alphanitronaphthalene (see a-Nitronaphthalene).
Alphapicoline (see a-Picoline).
Alphaterpinol (see a-Terpinol).
Alphatocopherol (see a-Tocopherol).
Alum ammonium, gran., bgs., works 100 lbs. 4.30 - —
Lump, dms., works ..... 100 lbs. 5.05 - —
Powd., dms., works ..... 100 lbs. 5.20 - —
USP, burnt., dms ..... lb. .20 - .21
hydrous, dms. ..... lb. .07¾- .08
Alum potassium, gran., bgs., works. 100 lbs. 4.55 - —
Lump, dms., works ..... 100 lbs. 5.30 - —
Powd., dms., works ..... 100 lbs. 5.45 - —
USP, burnt., dms ..... lb. .20 - .21
USP, hydrous, dms. ..... lb. .07¾- .08
Alum, potash-chrome, dms ..... lb. .17 - —
Alumina, calcined, bgs., c.l., works. lb. .05¼- —
bgs., l.c.l., works ..... lb. .05½- .08¼
Aluminum acetate, basic soln., 24%, bbls., l.c.l. works lb. .14 - —
Aluminum chloride, coml., anhyd., dms., c.l., works, frt. equald lb. .16 - —
dms., l.c.l., works lb. .16½- —
cryst., dms., c.l., works 100 lbs. 21.00 - —
dms., l.c.l., works 100 lbs. 21.50 - —
Soln., 32° cbys., c.l., works .... lb. .0495-
cbys., l.c.l., works ..... lb. .0570- .1095
tanks, works ..... 100 lbs. 3.95 - —
NF, gran., dms., works ..... lb. .31 - .32
Aluminum fluoride, tech., anhyd., bgs., c.l., works lb. .16¼- —
bgs., l.c.l., works ..... lb. .17¼- .19¼
bulk, c.l., basis 80% ..... lb. .14½- —
Aluminum fluoride in fib. dms. 0.35c. per lb. higher.
Aluminum formate, basic soln., containers extra, c.l., works. 100 lbs. 11.00 - —
containers extra, l.c.l., works. 100 lbs. 11.50 - —
Aluminum hydrate, heavy, bgs., c.l., frt. equald lb. .0365- —
bgs., 20,000-40,000 lb. lots, same basis lb. .039 - —
bgs., 2,000-20,000 lb. lots, same basis lb. .049 - —
bulk, c.l., same basis ... lb. .03¼- —
Aluminum hydroxide, dried, USP XV, fib. dms., works lb. .82½- —
fib. dms., contract, works lb. .79½- —
Aluminum hydroxide, gel, pharmaceutical, 14-15% Al_2O_3, fib dms., works lb. .22 - —
8-9½% Al_2O_3, fib. dms., works, lb. .19 - —
fib. dms., contract, works lb. .18 - —
Aluminum hydroxide, tech., powd., (see Aluminum hydrate).
Aluminum metal, 99½% + 30-lb. ingots, 10,000-lb. lots, frt. alld lb. .2810- —
50-lb. pigs, 10,000-lb. lots, frt alld. lb. .26 - —
Aluminum oxide, amorphous (see Alumina, calcined).
Aluminum paste, lining, extra-fine, dms lb. .71 - —
Standard grade, dms ..... lb. .48½- —
Aluminum powder, lining, extra-fine, dms lb. 1.13 - —
Standard grade, dms ..... lb. .83 - —
Aluminum paste and powder prices are f.o.b. shipping point. Add 1c. per lb. for 100-lb. dm., 1½c. per lb. for 50-lb. dm., 3c. per lb. for 10 lb. can and 5c. to 12c. per lb. for smaller containers. Deduct 1c. per lb. for single shipment of 400 to 1,499 lbs. 2c for 1,500 to 4,999 lbs., 3c. for 5,000 to 29,999 lbs. and 4c. for 30,000 lbs. or more. Where destination is within the continental U. S., a deduction equivalent to the lowest available common carrier transportation rate will be made from seller's invoice on orders of 200 lbs. or more.
Aluminum resinate, precip., 3.4% Al, dms lb. .40¼- —
Aluminum stearate, dibasic, ctns., c.l lb. .39 - —
ctns., l.c.l. ..... lb. .40 - .44
Monobasic, ctns., c.l. ..... lb. .39 - —
ctns., l.c.l. ..... lb. .40 - .44
Tribasic, ctns., c.l. ..... lb. .39 - —
ctns., l.c.l. ..... lb. .40 - .44
Aluminum sulfate, coml., grd., bgs. c.l., works, frt. equald ton 41.00 - —
bulk, c.l., same basis ton 40.00 - —
lump, bgs., c.l., same basis ton 44.00 - —
iron-free, bgs., c.l., works, frt. equald 100 lbs. 3.80 - —
bgs., l.c.l., works, frt. equald. 100 lbs. 4.30 - 8.30
USP, gran., 400-lb. dm., works. lb. .30 - —
USP, powd., dms., works .... lb. .27 - —
Aluminum sulfate prices $1 per ton higher in the South.
Aluminum trihydrate, heavy (see Aluminum hydrate, heavy).
Ambergris, gray, bots ..... oz. 6.50 -10.00
P-Aminoacetanilide, tech., paste, dms., frt. alld lb. 1.57 - —
Aminoacetic acid, NF, bbls., frt. adjusted lb. 1.50 - 1.75
Aminoazotoluene base, bbls., 100% basis lb. 1.03 - 1.18
p-Aminobenzoic acid, tech., dry, dms., works lb. 1.72 - —
2-Amino-4-chlorophenol, tech., solid, dms., frt. alld lb. 8.10 - —
p-Aminodiphenylamine, tech., solid, dms., frt. alld lb. 3.00 - —
Aminoethyl ethanolamine, dms., c.l., dlvd lb. .475 - —
dms., l.c.l., dlvd ..... lb. .49 - —
tanks, dlvd. ..... lb. .45 - —
2-Amino-2-methyl-1-propanol, dms., c.l., frt. alld lb. .44 - —
dms., l.c.l., frt. alld. ..... lb. .45 - —
tanks, frt. alld. ..... lb. .42 - —
m-Aminophenol, dist., dms., ton lots. lb. 2.05 - —
dms., smaller lots. ..... lbs. 2.50 - —
p-Aminophenol, dms., frt. alld. lb. 1.15 - —
Aminophylline, USP, 100-lb. dm., frt. alld lb. 3.25 - —
p-Aminosalicylic acid, dms., 100 lbs. or more, frt. adjusted lb. 3.40 - —
Ammonia, anhyd., fertilizer, tanks, works, frt. equald. E. of Rockies ton 88.00 - —
refrigeration, tanks, works, frt. equald. E. of Rockies ton 90.50 - —
Aqueous, 29.4%, tanks, works, anhyd. basis, E. of Rockies. ton 91.00 - —
Ammoniacal liquor (see Ammonia, aqueous).
Ammoniac, sal., gray, bgs., c.l., works, frt. equald 100 lbs. 8.25 - —
bgs., l.c.l., same basis 100 lbs. 8.65 -12.65
Ammoniac, sal., white (see Ammonium chloride, tech.)
Ammonium acetate, purif., dms lb. .40 - —
Ammonium benzoate, USP, fib. dms. ton lots, works lb. 1.00 - —
fib dms. 1,000-lb. lots, works. lb. 1.03 - —
Ammonium biborate, gran., dms., c.l., works ton 325 - —
dms., ton lots, ex whse. 100 lbs. 20.40 - —
dms., smaller lots, ex whse. 100 lbs 21.15 - —
Ammonium bicarbonate, dom., dms., c.l., works 100 lbs. 7.00 - —
dms., l.c.l., works ..... 100 lbs. 9.00 - —

Ammonium bichromate, dms., works, lb. .42 - .43
Ammonium bifluoride, dms., dlvd lb. 2145- .2245
Ammonium bromide, tech., gran., dms., l.c.l., same basis lb. .46 - —
Ammonium chloride, white, tech., fine gran., bgs., c.l., works, 100 lbs. 5.75 - —
bgs., l.c.l., works 100 lbs. 7.75 - 8.20
USP, gran., 250-lb. dm lb. .17¼- —
Ammonium citrate, dibasic, 250-lb. dm, f.o.b. works lb. .77 - —
Ammonium dichromate (see Ammonium bichromate)
Ammonium fluoride (see Ammonium bifluoride)
Ammonium gluconate, tech., 200-lb. dm., f.o.b. works E lb. .45 - —
Ammonium hydroxide (see Ammonia aqeous).
Ammonium iodide, NF, 25-lb. jar, f.o.b. works lb. 4.26 - —
Ammonium lauryl sulfate, dms., c.l., frt. alld lb. .20½- —
dms., l.t.l., frt. alld lb .21½- —
tanks, frt. alld lb. .19½- —
Ammonium lignin sulfonate, bgs., c.l., works 100 lbs. 3.25 - —
bgs., l.c.l., works 100 lbs. 3.40 - 3.65
Ammonium linoleate, 80%, dms., works lb. .50 - .55
Ammonium molybdate, CP, cryst., 400- lb. dms., 15,000-lbs. works, lb. 1.22 - —
400-lb. dms., 2,000-lb. contracts, works lb. 1.23 - —
400-lb. dms., works lb. 1.24 - —
Ammonium nitrate, dom., fertilizer grade, 33.5% N, bgs., f.o.b. works ton.68.00 - —
with dolomite, 20.5% N, bgs., c.l., Hopewell, Va ton.48.00 - —
Imp., Canadian, 33.5% N, eastern, bgs., c.l., ship't point, frt. equald to $3 ton base price ton.68.00 - —
Ammonium oxalate, tech., fine gran., 250-lb. dm., f.o.b. works E lb. .28½- —
Tech., powd., 200-lb. dm., same basis lb. .28½- —
Ammonium pentaborate, gran., bgs., c.l., works ton.193.00 - —
bgs., ton lots, ex whse 100 lbs.14.23 - —
bgs., smaller lots, ex whse. 100 lbs.15.48 -17.48
Ammonium pentaborate powder $10 per ton higher in bags.
Ammonium persulfate, tech., dms., 10-ton lots or more, works lb. .18 - —
dms., smaller lots, works lb. .20 - .23
Ammonium phosphate, coml., bgs., c.l., works, frt. equald lb. .09¼- —
bgs., l.c.l., same basis lb. .10 - —
Dibasic, NF, V, bbls., dms lb. .46 - —
Dibasic, tech., bgs., c.l., works, frt. alld lb. .09¼- —
Ammonium silicofluoride, dms., works lb. .12¼- .13¾
Ammonium sulfamate, bgs., c.l., t.l., works lb. .19 - —
bgs., l.c.l., works lb. .20½- .27
Ammonium sulfate, standard granular, bulk, f.o.b. works, base price ton.32.00 - —
purif., c.l., 100-lb. bgs., f.o.b. works lb. .08½- —
Large granular, bulk, c.l., works ton.35.00 - —
bgs., c.l., works ton.40.00 - —
Tech., bulk, c.l., t.l., works ton.52.00 - —
bgs., c.l., t.l., works ton.56.00 - —
bgs., l.c.l., t.l.l., works 100 lbs. 3.20 - 5.20
Ammonium sulfide, liq., 40-44%, tanks, frt. equald., 100% basis, ton.160.00 - —
Ammonium sulfocyanide, tech. (see Ammonium thiocyanate).
Ammonium thiocyanate, tech., cryst., dms., c.l., works lb. .20 - —
dms., l.c.l., works lb. .22 - .26
Tech. soln., 50%, tanks, frt. equald., basis ammonium thiocyanate content lb. .17¼- —
Ammonium thioglycolate, coml., 55-gal. dms., ton lots, 100% basis lb. 1.15 - —
d-Amphetamine hydrochloride, monobasic, dms lb.17.50 -23.50
dl-Amphetamine hydrochloride, dibasic, dms lb. 4.50 - 6.00
d-Amphetamine phosphate, fib. dms., 100-lb. lots lb.15.00 - —
dl-Amphetamine phosphate, dms.lb. 4.20 - 5.60
d-Amphetamine sulfate, fib. dms. lb.15.00 -17.00
dl-Amphetamine sulfate, fib. dms., lb. 4.20 - 5.60
Amyl acetate, ex fusel oil, tech., dist., from 125° to 150°C., dms., c.l., frt. alld, E. of Rockies lb. .18¼- .19
dms., l.c.l., same basis lb. .20 - .20½
tanks, same basis lb. .16 - .16½
Amyl acetate, ex pentane, reg., dms., c.l., dlvd lb. .19 - —
oms., l.c.l., dlvd. lb. .21½- —
tanks, dlvd. lb. .16½- —
tech., dms., c.l., dlvd. lb. .17 - —
dms., l.c.l., dlvd. lb. .18½- —
tanks, dlvd. lb. .14½- —
Amyl acetate, syn., oxo process, dms., c.l., dlvd lb. .19 - —
dms., c.l., dlvd. lb. .20½- —
tanks, dlvd. lb. .16½- —
Amyl alcohol, ex fusel oil (see Fusel oil refd).
Amyl alcohol, ferment, refd., 128°-132 C., dms., l.c.l., dlvd lb. .43½- —
refd., ACS grade, dms., l.c.l., dlvd lb. .45½- —
ex pentane, mixed amyls, dms., c.l., frt. alld lb. .19 - —
dms., l.c.l., frt. alld lb. .20½- —
tanks, frt. alld. lb. .16½- —
primary, dms., c.l., frt. alld. lb. .19¾- .20¼
dms., l.c.l., frt. alld. lb. .21¼- .21¾
tanks, frt. alld. lb. .17¼- .17¾
Sec-synthetic, dms., c.l., works, frt. alld lb. .19 - —
dms., l.c.l., same basis lb. .20½- —
tanks, same basis lb. .17 - —
Tert-synthetic, dms., c.l., frt. alld. E lb. .17 - —
dms., l.c.l., frt. alld. E. lb. .18½- —
tanks, frt. alld. E. lb. .14½- —
Amyl alcohol, 1-pentanol (syn. normal), dms., c.l., works lb. .41½- —
dms., l.c.l., works lb. .43 - —
tanks, works lb. .39½- —
2-pentanol, dms., c.l., works lb. .65 - —
dms., l.c.l., works lb. .70 - —
tanks, works lb. .00 - —
Amyl n-butyrate, dms. lb. 1.00 - 1.25
Amyl cinnamic aldehyde, dms lb. 1.70 - 2.20
p-tert Amyl phenol, dms., c.l., works, lb. .26¾- —
dms., l.c.l., works lb. .27¾- —
Amyl salicylate, cns., dms. lb. .73 - 1.08
Amyris oil, dms. lb. 1.65 - 2.05
Anethole, tech., dms. lb. .92 - 1.40
USP, cns., dms. lb. 1.10 - 1.45
Angelica root oil, bots lb. .50 - 1.00
Angelica root oil, bots lb.120.00 -140.00
Angelica seed oil, bots lb.120.00 -130.00
Aniline dms., c.l., frt. alld lb. .20 - —
dms., l.c.l., frt. alld. lb. .21 - —
tanks, frt. alld. lb. .18 - —
Aniline oil (see Aniline).
Aniline salt, dms., c.l., t.l., 20,000 lbs. min., frt. alld lb. .33 - —
dms., l.c.l., same basis lb. .35 - —
Anise oil, USP, dms. lb. 1.75 - 3.00
Anise seed, Mexican, bgs. lb. .16 - —
Spanish, bgs. lb. .16½- —
Anisic aldehyde, dms lb. 1.50 - 2.20
o-Anisidine, dms., c.l., frt. alld lb. .80 - —
dms., l.c.l., same basis lb. .82 - —
tanks, same basis lb. .78 - —
p-Anisidine, dms., works lb. .97 - —
Anthracene, 90-95%, dms., c.l., t.l. o.b. works .42½- —
dms., l.c.l., minimum shipment 1,000 lbs., same basis lb. .45 - —
Anthranilic acid, 99%, 150-lb. dms., dlvd lb. 1.15 - —
Anthraquinone, 99.5%, bbls., c.l., frt alld lb. .83 - —
bbls., l.c.l., same basis lb. .86 - —
Electrical grade, bbls., l.c.l., same basis lb. 1.10 - —
Antimony butter (see Antimony trichloride).
Antimony metal, bulk, c.l., mines lb. .29 - —
cs., c.l., mines lb. .29½- —
Antimony oxide, bgs., c.l., frt. alld. lb. .26½- —
bgs., l.c.l., frt. alld. lb. .28 - —
Prices of antimony oxide are 2¢ higher west of the Rockies.
Antimony sulfide, approx. 65%, bgs., 10,000-lb. lots, dlvd lb. .23 - —
bgs., smaller lots, dlvd lb. .24 - .26
Antimony trichloride, anhyd., solid, pails, c.l., works lb. .41 - —
pails, l.c.l., works lb. .43 - —
Antimony-potassium tartrate, tech., powd., 250-lb., dm., f.o.b. works, E lb. .69½- —
USP, powd., 250-lb. dm., same basis lb. .74½- —
Apomorphine hydrochloride, USP, bots., 25-oz. lots oz.35.60 - —
Apricot kernel oil, USP, dms lb. .70 - 1.25
Arabic gum, amber sorts, 10 bgs. lb. .23 - .27
USP, powd., bbls. lb. .29 - .30
Areca nuts, powd., bbls. lb. .13 - —
Arecoline hydrobromide, NF, bots., tins, 100 oz. or more oz. 4.00 - —
l-Arginine, free base, dms., 10-kilo lots or more kilo.90.00 - —
l-Arginine glutamate, dms., 10-kilo lots or more kilo.60.00 - —
l-Arginine monohydrochloride, dms., 10-kilo lots or more kilo.60.00 - —
Arnica flowers (true Montana), bls. lb. .75 - —
Aromatic petroleum solvents (see Solvent Naphtha, petroleum, aromatic).
Arsenic, crude (95%), bulk, c.l., works lb. .016 - —
bbls., c.l., works lb. .0.31 - —
Arsenic trioxide, NF, powd., dms., 300-lbs., f.o.b. works lb. .48 - —
Arsenic, white, powd., bbls., c.l., works lb. .04½- —
bbls., l.c.l., works lb. .06½- .07⅛
Arsenous acid, tech. (see Arsenic, white).
Arsenous acid, USP (see Arsenic trioxide).
Arylid maroons, deep shades, bbls. lb. 3.70 - —
Light shades, bbls. lb. 2.85 - —
Asafetida gum, cns lb. .36 - .40
Powd., bbls., dms lb. .75 - .80
Asbestine (see Talc, fibrous, New York).
Asbestos, Canadian crude
6D, c.l. (30 tons), mines ton.86.00 - —
7D, c.l. (30 tons), mines ton.75.00 - —
7F, c.l. (30 tons), mines ton.71.00 - —
7H, c.l. (30 tons), mines ton.61.00 - —
7K, c.l. (30 tons), mines ton.50.00 - —
7M, c.l. (30 tons), mines ton.44.00 - —
7R, c.l. (30 tons), mines ton.43.00 - —
7RF, c.l. (30 tons), mines ton.44.00 - —
7T, c.l. (30 tons), mines ton.41.00 - —
7TF, c.l. (30 tons), mines ton.44.00 - —
Asbestos prices are in Canadian funds; l.c.l. lots $4 per ton higher.
Ascorbic acid, USP, dms., 100-kilos. kilo. 7.35 - —
dms., less than 100-kilos kilo.7.75 - —
Ash, black (see Barium sulfide).
Asphalt, gilsonite, black jet, bgs., c.l., mines ton.40.00 - —
ex-whse, N. Y., N. J. ton.86.50 - —
seconds, 300°-390° F. fusing pt., bgs., c.l., mines ton.35.00 - —
select, 350° F. fusing pt., bgs., c.l., mines ton.41.00 - —
270°-295° F. fusing pt., bgs., c.l., mines ton40.00 - —
Manjak No. 10 crude, dms., works. lb. .07 - —
Petroleum, cut-back, tanks, tank-wagon, refy gal. .09½- —
emulsion, tanks, tankwagon, refy. gal. .09½- —
steam-refd., 50-80 penetration, tanks, tankwagon, refy. ton.21.00 - —
85-300 penetration, tanks, tank-wagon, refy. ton.20.00 - —



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★ *Acetaldehyde*
★ *Acetic Acid*
★ *Amyl Acetate*
★ *Refined Fusel Oil*
★ *N-Butyl Chloride*

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Aspirin (see Acetylsalicylic Acid).
Atropine, NF, tins ..... oz. 5.75 - 7.50
Atropine sulfate, USP, bots ..... oz. 5.25 - 5.75
Azelaic acid, bgs., c.l., dlvd. .... lb. .40 - —
bgs., ton lots, same basis ..... lb. .41 - —

B

Bacitracin, bulk, 1,000,000.000 or more units 50,000 units. .65 - —
less than 1,000,000.000 units. 50,000 units. .70 - —
Balm of Gilead buds, dried, bgs. lb. 1.25 - 1.35
Barberry root bark, bgs ..... lb. 1.00 - 1.10
Barbital, NF, 100-lb. dms., f.o.b. works lb. 4.50 - —
Barbital sodium, NF, 100-lb. dms. lb. 4.75 - —
Barium carbonate, precip., bgs., c.l., works ton.111.50 - —
bgs., smaller lots, works ton.126.50 - —
Barium chlorate, dms., works lb. .32 - .41
Barium chloride, anhyd., bgs., c.l., works ton.176.00 - —
bgs., l.c.l., works ton.196.00 - —
NF, cryst., dms., 400-lbs., works lb. .23 - —
Tech., cryst., bgs., c.l., works. 100 lbs. 7.00 - —
bgs., l.c.l., works ..... 100 lbs. 8.00 - —
Barium chromate, bgs., frt. equald. lb. .33 - —
Barium dioxide (see Barium peroxide).
Barium hydrate, cryst., bgs., c.l., t.l., frt. equald ton.208.00 - —
bgs., l.c.l., t.l.l., frt. equald ton.218.00 - —
Barium monohydrate, 99% bgs., c.l., frt. equald 100 lbs.11.25 - —
bgs., l.c.l., frt. equald 100 lbs.11.75 - —
Barium monoxide (see Barium oxide).
Barium nitrate, bbls., c.l., t.l., dlvd. lb. .16 - —
bbls., l.c.l., t.l.l., dlvd. ..... lb. .17 - —
Barium oxide, grd., dms., c.l., t.l., frt equald ton275.00 - —
dms., l.c.l., t.l.l., frt. equald ton.285.00 - —
Barium peroxide, dms., frt. equald. lb .20 - —
Barium stearate, ctns., c.l., frt. alld. lb. .41 - —
ctns., l.c.l, same basis ..... lb. .42 - .46
Barium sulfate, tech. (see Barytes and blanc fixe).
Barium sulfate, X-ray, 100-lb. dm. lb. .19½- —
Barium sulfide, dms., c.l., works. ton.100.00 - —
dms., l.c.l., works ..... ton.110.00 - —
Barytes, southern, off-color, bgs., mines ton.25.00 - —
95-75%, bgs., mines ..... ton.25.00 - —
white, water-grd., paper bgs., c.l., St. Louis ton.55.00 -55.25
paper bgs., ex whse., New York ton79.85 - —
Battery acid, cbys., c.l., works E. 100 lbs. 2.35 - —
cbys, l.c.l., works, E ..... 100 lbs. 2.65 -10.95
Bauxite, bulk, mines ..... ton. 7.00 -10.00
Bay oil, NF, Puerto Rican, 50-55%, cns lb. 2.40 - 2.70
55-60%, cns. ..... lb. 2.50 - 3.05
NF, West Indian, 50-55%, cns. dms lb. 2.35 - —
Bayberry wax, bgs ..... lb. .45 - .50
Beeswax, crude, African bgs. ..... lb. .50 - .52
Brazilian, bgs ..... lb. .55 - .56
Central American, bgs ..... lb. .53 - —
Chilean, bgs. ..... lb. .56 - —
Refd., USP, bleached white, bricks, 100-lb. ctns lb. .69 - .71
white, slabs, 100-lb. ctns .. lb. .68 - .70
yellow, bricks, 100-lb. ctns lb. .59 - .61
yellow, slabs, 100-lb. ctns lb. .58 - .60
Belladonna leaf, bls. ..... lb. .24 - .26
Belladonna root, bls. ..... lb. .28 - .35
Bentonite, dom. 200 mesh, bgs., c.l., mines ton.14.00 - —
Imp. Italian, white, high gel., bgs., 5-ton lots, ex whse ton.95.20 - —
bgs., 1-ton lots, ex whse ton.99.00 - —
Imp. Italian, white, low gel., bgs., 5-ton lots, ex whse ton.93.40 - —
bgs., 1-ton lots, ex whse ton.97.16 - —
Benzal chloride, cbys., works lb. .44 - —
Benzaldehyde, NF, dms ..... lb. .80 - 1.05
Tech., dms., c.l., t.l. ..... lb. .47 - —
dms., l.c.l. ..... lb. .48 - —
Benzene, coaltar, pure or nitration, tanks, works:
Bethlehem, Pa ..... gal. .34 - —
Birmingham district .. gal. .34 - —
Chicago district ..... gal. .34 - —
Cleveland district .... gal. .34 - —
Geneva, Utah ..... gal. .34 - —
Johnstown, Pa. ..... gal. .34 - —
Lackawanna, N. Y. .. gal. .34 - —
Lone Star, Tex ..... gal. .34 - —
Lorain, Ohio ..... gal. .34 - —
Middletown, Ohio ..... gal. .34 - —
Mennequa, Colo. .... gal. .34 - —
Philadelphia district .. gal. .34 - —
Pittsburgh district ... gal. .34 - —
Sparrows Point, Md. .. gal. .34 - —
Syracuse, N. Y. ..... gla. .34 - —
Terre Haute, Ind ..... gal. .34 - —
Youngstown, Ohio .... gal. .34 - —
Benzene, petroleum, nitration or industrial, Houston, Tex., tanks, gal. .34 - .40
Benzene hexachloride, 25% and 99% gamma isomer (see Lindane).
Benzene hexachloride, tech., high gamma, bgs., c.l., t.l., consignment, dlvd. gamma-unit. .0075- —
bgs., c.l., t.l., direct sale, f.o.b. works gamma-unit. .0065- —
Tech., low gamma, bgs., c.l., t.l., consignment, dlvd. gamma-unit. .0075- —
bgs., c.l., t.l., direct sale, f.o.b. works gamma-unit. .0056- —
Benzidine hydrochloride, bbls., c.l., frt. alld., 100% basis lb. 1.19 - —
bbls., l.c.l., same basis ..... lb. 1.21 - —
Benzidine sulfate, tech., bbls., frt. alld., 100% basis lb. 1.21 - —
Benzidine yellow, AAA, bbls., dlvd. lb. 2.20 - —
AAOT, bbls., dlvd. ..... lb. 2.55 - —
Lightfast, bbls., dlvd. ..... lb. 3.40 - —
Benzocaine, dms., 100-lbs., frt. alld. lb. 3.25 - —
Benzoic acid, tech., bbls., dms., c.l., t.l., frt., alld lb. .37 - —
bbls., dms., ton lots, same basis lb. .41 - —
bbls., dms., 1,000-lb lots, same basis lb. .43 - —
USP, bbls., dms., ton lots lb. .48 - —
bbls., dms., 1,000-lb lots lb. .50 - —

BENZOL

Benzol quotations, both coaltar and petroleum, may be found under Benzene.

Benzoin gum, Sumatra, cs. ..... lb. .32 - —
Benzophenone, dms. ..... lb. 1.40 - 1.65
Benzotriazole, tech., dms., 1,000-lb. lots, works lb. 2.25 - —
Benzotrichloride, cbys., 1,000-lb. lots or more, frt. equald. lb. .21 - —
cbys., smaller lots, frt. equald. lb. .23 - —
Benzoyl chloride, cbys., dms., c.l., works, frt. equald. lb. .22 - —
cbys., l.c.l., same basis ..... lb. .23 - —
tanktrucks, dlvd. Metropolitan area lb. .21 - —
Benzoyl peroxide, purif., fib. dms., 50 to 1,000-lb lots, works lb. .96 - 1.06
Benzyl acetate, f.f.c., cns., dms. lb. .58 - .79
Benzyl alcohol, NF, dms. ..... lb. .58 - .80
Tech., dms., dlvd. ..... lb. .47½- .65
Benzyl benzoate, USP, 40-lb. dms lb. .62 - 1.00
Benzyl chloride, tech., cbys., dms., c.l., works, frt. equald lb. .22½- .25½
cbys., dms., l.c.l., same basis lb. .23½- .25½
tanktrucks, dlvd. Metropolitan area lb. .21 - —
A 2½c. differential is quoted on benzyl chloride in 5-gal. cbys. In steel dms. prices are ½c. lower.
Benzyl cinnamate, cns. ..... lb. 3.30 - 3.60
N-Benzyl-N,N-dimethylamine, 50 dms., frt. alld lb. 1.25 - —
12-49 dms., same basis ..... lb. 1.35 - —
1-11 dms., same basis ..... lb. 1.90 - —
Benzyl formate, cns. ..... lb. 1.85 - 2.10
Benzyl isoeugenol, cns ..... lb. 9.25 - —
Benzyl propionate, bots. ..... lb. 1.35 - 1.65
Benzyl salicylate, bots ..... lb. 1.50 - 1.85
Benzylidine acetone, bots. ..... lb. 1.75 - 1.80
Benzylidine chloride (see Benzal chloride).
Berberine bisulfate, cns ..... lb. 56.50 - —
Berberine hydrochloride, bots ... lb. 56.50 - —
Bergamot oil, nat., NF, Italian, cns. lb. 11.00 -12.00
Betagammapicoline (see b,g-Picoline).
Betahydroxynaphthoic acid (see b-Oxynaphthoic acid).
Betaoxynaphthoic acid (see b-Oxynaphthoic acid).
Betamethylnaphthalene (see Methylnaphthalene).
Betanaphthol (see b-Naphthol).
Betanaphthylamine (see b-Naphtholamine).
Betaphenylethylamine (see b-Phenylethylamine).
BHC (see Benzene hexachloride, tech.).
Biotin, cryst., bots ..... gram. 10.00 - —
Biphenyl (see Diphenyl).
Birchtar oil, crude, cns ..... lb. 1.50 - 1.90
Rectified, cns. ..... lb. 1.75 - 2.00
Bismuth chloride, jars ..... lb. 5.11 - —
Bismuth hydroxide, dms ..... lb. 4.60 - 4.65
Bismuth metal, bxs., ton lots ... lb. 2.25 - —
Bismuth nitrate, cryst., 250-lb. dm. lb. 2.25 - —
Bismuth oxychloride, 25-lb. dm., f.o.b. works lb. 4.42 - —
Bismuth subcarbonate, USP, 150-lb. dm lb. 3.70 - —
Bismuth subgallate, NF, 200-lb. dm., f.o.b. works lb. 4.43 - —
Bismuth subiodide, fib dms .. lb. 5.37 - —
Bismuth subnitrate, NF, 200-lb. dm., f.o.b. works lb. 3.15 - —
Bismuth subsalicylate, USP, 100-lb. dm., f.o.b. works lb. 4.25 - —
Bismuth trioxide, 100-lb. dms., f.o.b. works lb. 4.40 - —
Bismuth-ammonium citrate, USP, powd., jars lb. 4.22 - —
Bisphenol-A, bgs., c.l., t.l., single shipt., 70,000-lbs. or more, frt. alld lb. .29½- —
bgs., c.l., t.l., less than 70,000 lbs., same basis lb. .30 - —
bgs., l.c.l., same basis ..... lb. .31 - —
Blackberry root bark, bls ..... lb. .50 - .55

BLACK PIGMENTS

Black pigment quotations are listed individually. For example, prices on Black, acetylene, may be found in the A's under Acetylene black.

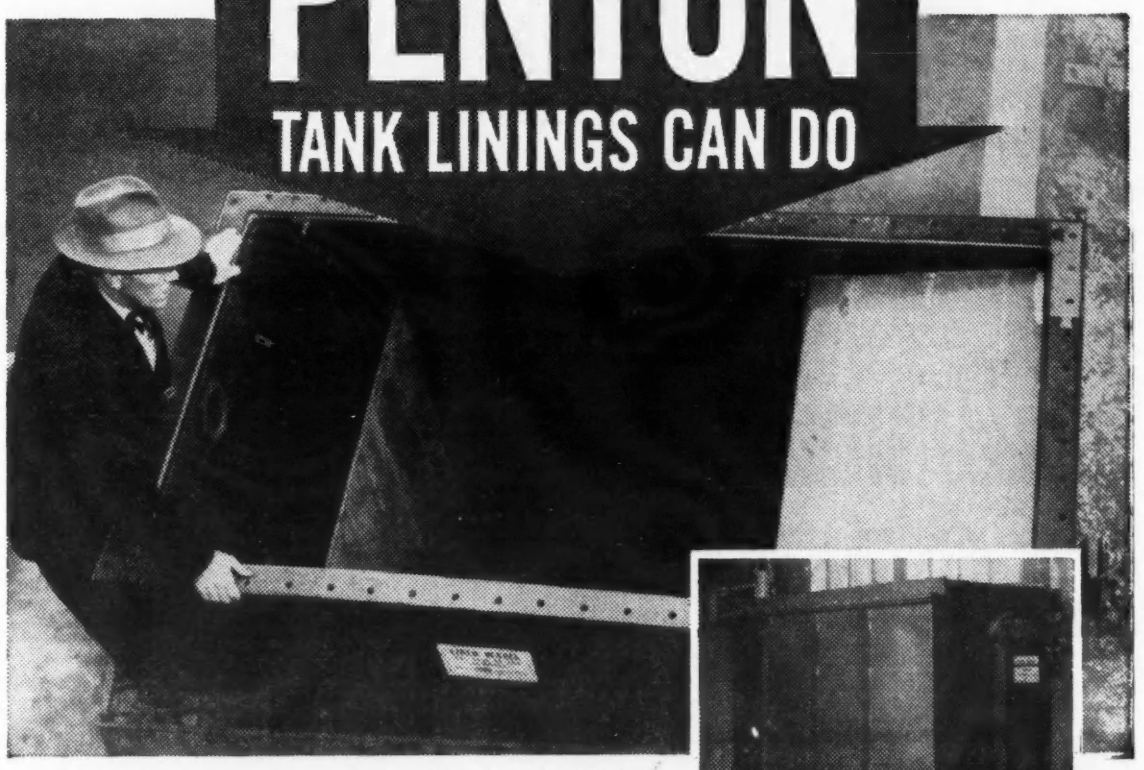
Blanc fixe, direct process, bgs., c.l., works ton.145.00 - —
bgs., l.c.l., works ..... ton.155.00 - —
bgs., l.c.l., New York whse ton.195.00 - —
Blood, dried, 16-16½% ammonia, bgs., New York unit-ton. 5.50 - —
Bloodroot, bls. ..... lb. .90 - 1.00

BLUE PIGMENTS

Blue pigment quotations are listed individually. For example, prices on Blue, ultramarine, may be found in the U's under Ultramarine blue.

Blue dyes (see Dyes).
Blue vitriol (see Copper sulfate).
Bois de rose oil, Brazilian, dms lb. 2.20 - 2.85
Peruvian, dms. ..... lb. 1.90 - 2.30
BON acid maroons, pure, bbls lb. 1.75 - —
Resinated, bbls. ..... lb. 1.50 - —
Bone black, dms., l.c.l., frt. alld lb. .2275- .2425
c.l., works ..... lb. .2075- .2225
Pacific coast bone black prices 2c. per lb. higher.
Bonemeal, steamed, works, E ton.80.00 - —

SEE WHAT
PENTON*
TANK LININGS CAN DO



In operation in processing system in a large East Coast chemical plant, this Penton-lined tank has successfully met all service requirements since its installation. Tanks for plating solutions, chemical milling operations, and the storage and handling of other corrosive fluids at elevated temperatures are typical of the many new uses where Penton linings are now proving their ability to outperform other materials in their class.

*Hercules registered trade mark for chlorinated polyether.

Penton linings readily convert carbon steel tanks into vessels capable of handling highly corrosive fluids at elevated temperatures. The ability of Penton linings to upgrade low-cost metal substrates in chemical processing systems has led to their widespread use in many areas where only high-cost materials were previously qualified to serve.

Linings made with this new thermoplastic are applied by the use of a straightforward adhesive system and conventional gas welding techniques. They provide a highly practical means of supplying the superior corrosion resistance offered by Penton to vessels in a wide range of shapes and sizes.

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Delaware Trust Building
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6760-2

Bone phosphate, defluorinated of lime (see Defluorinated phosphate).
Bone phosphate, precip. (see Calcium phosphate, tribasic).
Borax, tech., anhyd., 99½%, bgs., c.l., works ton 92.00 - —
bgs., ton lots, ex whse, New York or Chicago 100 lbs. 7.42 - —
bgs., smaller lots, same basis 100 lbs. 8.67 -10.67
bulk, c.l., works ton 83.00 - —
gran., decahydrate, 99½%, bgs., c.l., works ton 50.00 - —
bgs., ton lots, ex whse, New York or Chicago 100 lbs. 5.32 - —
bgs., smaller lots, same basis. 100 lbs. 6.57 - 8.57
bulk, c.l., works ton 43.50 - —
gran., pentahydrate, 99½%, bgs., c.l., works ton 64.50 - —
bgs., ton lots, ex whse, New York or Chicago 100 lbs. 6.05 - —
bgs., smaller lots, same basis 100 lbs. 7.30 - 9.30
bulk, c.l., works ton 58.00 - —
USP, powd., bgs., c.l., works, ton 54.00 - —
bgs., ton lots, ex whse, New York or Chicago 100 lbs. 6.45 - —
bgs., smaller lots, same basis. 100 lbs. 7.70 - 9.70
Bordeaux powder, tribasic, bgs., c.l., dlvd lb. .24 - —
bgs., l.c.l., same basis lb. .26 - —

Boric acid, tech., anhyd., 99.9%, bgs., c.l., works ton 335.00 - —
bgs., ton lots, ex whse, New York or Chicago 100 lbs. 19.62 - —
bgs., smaller lots, same basis. 100 lbs. 20.87 -22.87
cryst., 99.9%, bgs., c.l., works. ton 163.50 - —
bgs., ton lots, ex whse, New York or Chicago 100 lbs. 11.05 - —
bgs., smaller lots, same basis. 100 lbs. 12.30 -14.30
dms., c.l., works ton 188.50 - —
dms., ton lots, ex whse., New York or Chicago. 100 lbs. 12.30 - —
bgs., smaller lots, same basis 100 lbs. 13.05 - —
gran., 99.9%, bgs., c.l., works, ton 112.00 - —
bgs., ton lots, ex whse, New York or Chicago 100 lbs. 8.47 - —
bgs., smaller lots, same basis. ton 174.25 - —
dms., c.l., works ton 137.00 - —
dms., ton lots, ex whse, New York or Chicago 100 lbs. 9.72 - —
dms., smaller lots, same basis 100 lbs. 10.47 - —
bulk, c.l., works ton 106.00 - —
powd., bgs., ton lots, ex whse., New York or Chicago. 100 lbs. 8.85 - —
bgs., smaller lots, same basis 100 lbs. 10.10 -12.10

Boric acid, powd., dms., smaller lots, same basis 100 lbs. 11.45 - —
USP boric acid $25 per ton higher in bags.
Borneol, cns. lb. 2.75 - —
Boron trichloride, CP, 1,800-lb. cyls., works lb. 1.25 - —
100-lb. cyls., works lb. 1.70 - —
Boron trifluoride, gas, cyls., t.l., works lb. .70 - —
cyls., l.t.l., works lb. .70 - —
Brimstone (see Sulfur).
Broenner's acid, bbls. lb. 1.53 - —
Bromine, purif., cs., c.l., t.l., dlvd. E. of Rockies lb. .32 - —
cs., l.c.l., same basis lb. .34 - .39
ret. dms., c.l., t.l., dlvd. E. of Rockies lb. .31 - —
ret. dms., l.c.l., same basis lb. .31 - .34
tanks, same basis lb. .21½- —
Bromochloromethane, dms., c.l., frt. equald lb. .48 - —
dms., l.c.l., same basis lb. .50 - —
tanks, same basis lb. .47 - —
Bromoform, pharmaceutical grade, 100-lb. cbys lb. 1.80 - 1.90
Bromstyrol, bots. lb. 5.35 - 5.70
Brucine, cns oz. Nominal.
Brucine sulfate, NF, cns. 1.45 - 1.75
Buchu leaves, bbls. lb. .70 - .75

BROWN PIGMENTS

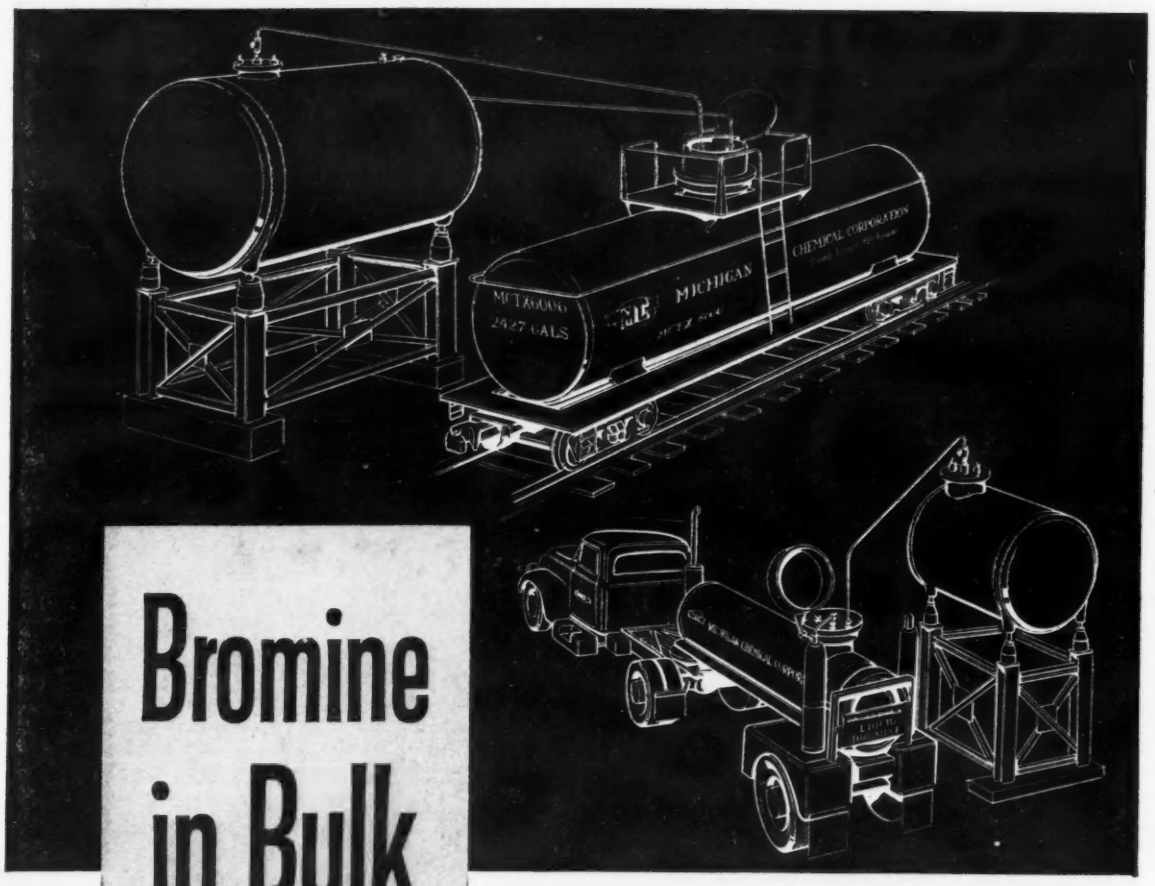
Brown pigment quotations are listed individually. For example, prices on Brown, Iron oxide, may be found in the I's under Iron oxide brown.

Butadiene, refd. cyls., c.l., refy. lb. .21 - —
cyls., l.c.l., refy. lb. .22 - —
tanks, dlvd. lb. .14½- —
Butene-1, tanks, works lb. .0625- —
Butene-2, tanks, works lb. .0570- —

n-Butyl acetate, ferment, dms., c.l., frt. alld. lb. .17 - —
dms., l.c.l., same basis lb. .18¼- —
tanks, same basis lb. .14¼- —
Syn., dms., c.l., dlvd. E. lb. .17 - —
dms., l.c.l., same basis lb. .18½- —
tanks, same basis lb. .14½- —
sec-Butyl acetate, syn., dms., c.l., dlvd. E. lb. .14¾- —
dms., l.c.l., same basis lb. .16¼- —
tanks, same basis lb. .12¼- —
n-Butyl acrylate, dms., c.l. or t.l., straight or mixed frt. alld. E lb. .42½- —
dms., l.t.l., same basis lb. .43½- —
tanks, same basis lb. .40 - —
Prices of n-Butyl acrylate are 1c. per lb. higher in Ariz., Calif., Idaho, Nev., Ore., Utah and Wash.
n-Butyl alcohol, ferment, dms., c.l., frt. alld. lb. .18 - —
dms., l.c.l., frt. alld. lb. .19½- —
tanks, frt. alld. lb. .15½- —
n-Butyl alcohol, syn., dms., c.l., dlvd. lb. .18 - —
dms., l.c.l., frt. alld. lb. .19½- —
tanks, dlvd. lb. .15½- —
Sec-synthetic, dms., c.l., dlvd. lb. .15 - —
dms., l.c.l., dlvd. lb. .16½- —
tanks, dlvd. lb. .12½- —
n-Butyl alcohol, tert-synthetic, dms., c.l., frt. alld., dlvd E. lb. .16 - —
dms., l.c.l., same basis lb. .17½- —
tanks, same basis lb. .13½- —
Butyl aldehyde (see Butyraldehyde).
Butyl chloride, dms., c.l., works lb. .37½- —
dms., l.c.l., works lb. .38¼- —
n-Butyl ether, dms., c.l., works lb. .35¼- —
dms., l.c.l., works lb. .36 - —
tanks, works lb. .33¼- —
Butyl lactate, dms., c.l., frt. alld. E. Rockies lb. .42½- —
dms., l.c.l., same basis lb. .43½- —
tanks, same basis lb. .40 - —
Butyl laurate, dms., works lb. .37½- —
Butyl methacrylate, dms., c.l., t.l., works lb. .55 - —
dms., l.c.l., works lb. .55½- —
Butyl oleate, refd., dms., l.c.l., works lb. .32 - —
Butyl phenylacetate, dms. lb. 4.50 - 4.60
Butyl phthalate (see Dibutyl phthalate).
Butyl stearate, dms., c.l., frt. alld. E. of Mississippi lb. .27¼- —
dms., l.c.l., same basis lb. .28¼- —
Butylamine (see Mono-, Di- and Tri-butylamine).
tert-Butylamine, dms., c.l., t.l., f.o.b. works lb. .47 - —
dms., l.c.l., same basis lb. .47½- —
tc., t.t., same basis lb. .45 - —
Butylated hydroxyanisole, food grade, dms., dlvd. lb. 4.75 - —
6-tert-Butyl-m-cresol (see Mono-tert-butyl-m-cresol).
Butylated hydroxytoluene (see 2,6-Di-tert-butyl-p-cresol).
1,3-Butylene glycol, dms., c.l., t.l., dlvd lb. .20½- —
dms., l.c.l., l.t.l., f.o.b. works lb. .22 - —
tanks, dlvd lb. .18 - —
p-tert-Butylphenol, bgs., c.l., dlvd., lb. .27½- —
bgs., l.c.l., works lb. .28½- —
Butyraldehyde, dms., c.l., dlvd lb. .22 - —
dms., l.c.l., dlvd. lb. .23½- —
tanks, dlvd. lb. .19½- —
Butyric acid, 99%, dms., c.l., frt. equald lb. .34 - —
dms., l.c.l., same basis lb. .34½- —
tanks, same basis lb. .32½- —
Butyric ether (see Ethyl butyrate).
Butyrolactone, dms., c.l., t.l., works. lb. .40 - —
dms., l.c.l., same basis lb. .43 - —

C

Cacao butter (see Cocoa butter).
Cadmium CP red dark shade, bbls., frt. alld. E. of Rockies lb. 5.55 - —
Light shade, bbls., same basis lb. 4.65 - —
medium shade, bbls., same basis. lb. 5.30 - —
Medium light shade, bbls., same basis lb. 4.90 - —
Orange-red shade, bbls., same basis lb. 4.30 - —
Yellow, all shades, bbls., frt. alld. E. of Rockies lb. 2.85 - —
Cadmium iodide, 25-lb. fib. dms lb. 6.75 - 7.00
Cadmium metal, ingots or sticks, ton lots, cs., dlvd lb. 1.30 - —
Cadmium-mercury lithopone orange, deep shade, bbls., frt. alld E. of Rockies lb. 1.65 - —
Cadmium-mercury lithopone red, dark shade, bbls., same basis lb. 1.95 - —
Red, light shade, bbls., same basis. lb. 1.72 - —
Red, medium shade, bbls., same basis lb. 1.87 - —
Red, medium light shade, bbls., same basis lb. 1.80 - —
Red, maroon shade, bbls., same basis lb. 2.03 - —
Cadmium-selenide lithopone maroon, bbls., frt. alld E. of Rockies lb. 2.76 - —
Orange, bbls., same basis lb. 1.58 - —
Cadmium-selenide lithopone red, orange-red shade, bbls., same basis lb. 1.72 - —
Red, dark shade, bbls., same basis. lb. 2.56 - —
Red, light shade, bbls., same basis. lb. 1.88 - —
Red, medium shade, bbls., same basis lb. 2.00 - —
Red, medium-light shade, bbls., same basis lb. 2.23 - —
Calmium-selenide lithopone, yellow, all shades, bbls., frt. alld. E. of Rockies lb. 1.19 - —
Caffeine, NF, citrated, dms., 100-lb. lots or more lb. 2.70 - —
USP, nat., cryst., anhyd., dms., 100-lb. lots or more lb. 2.10 - —
Caffeine, USP, nat., cryst., hydrous, dms., 100-lb. lots or more, lb. 1.96 - —
USP, syn., anhyd., dms., 100-lb. lots or more lb. 2.10 - —
cryst., hydrous, dms., 100-lb. lots or more lb. 1.96 - —
Cajuput oil, native, cns. lb. 1.75 - 2.00
Redist., USP, cns. lb. 1.90 - 2.10
Calamine, USP, dms. lb. .34 - —
Calamus oil, bots. lb. 12.00 -20.00
Calciferol, cryst., 10-kilo or more lots, works gram. .54 - —
1-10 kilo lots gram. .55 - —
Calciferol, in edible oil (see Viosterol).
Calcium p-aminosalicylate trihydrate, fib. dms., 100 lbs. or more, frt. adjusted lb. 3.10 - —
Calcium arsenate, dealers, bgs., c.l., frt. alld lb. .09 - .09¼
bgs., l.c.l., same basis lb. .10 - .10¼
Calcium bromide, NF, jars, 100 lbs. or more lb. .97 - —



Bromine in Bulk

Saves Dollars! Saves Time!

LOOK AT THESE ADVANTAGES: Thousands of dollars a year can be saved by converting facilities to receive bromine in bulk. For example, with tank car orders, you save 9½¢ a lb. as compared to the drum price; 10½¢ a lb. over bottles. With tank truck orders, you save 7¢ a lb. over drums and 8¢ a lb. over bottle shipments. You will free considerable capital now tied up in container deposits. Finally, you will save both time and money now used in handling the smaller bromine containers.

BULK STORAGE PAYS OFF FAST! If you use as little as 60,000 lbs. of bromine a year, delivered by tank truck, you can save the cost of the necessary 1000 gal. bulk-storage installation in about a year.

Tank cars are available in 60,000 lb. and 100,000 lb. capacities. Tank trucks contain 14,000 lbs. each.

WE CAN SHOW YOU HOW! Our experience in the storage and handling of bromine is extensive and we want to share it with you. If you would like engineering prints, specifications, and technical counsel, get in touch with us. Michigan Chemical also offers you these advantages: A steady, uncommitted supply of bromine at tonnage prices; and a large bromine bulk fleet for prompt service.

Bulk shipments from: El Dorado, Arkansas and Manistee, Michigan. Drums and bottles from Manistee and convenient warehouse locations.

For complete listing of Michigan Chemical products, see your copy of OPD Buyers Directory Issue, Chemical Materials Catalog or Chemical Week Buyers Guide.

MICHIGAN CHEMICAL CORPORATION

643 North Bankson Street, Saint Louis, Michigan

EASTERN SALES OFFICE: 230 Park Avenue, New York 17, N. Y.

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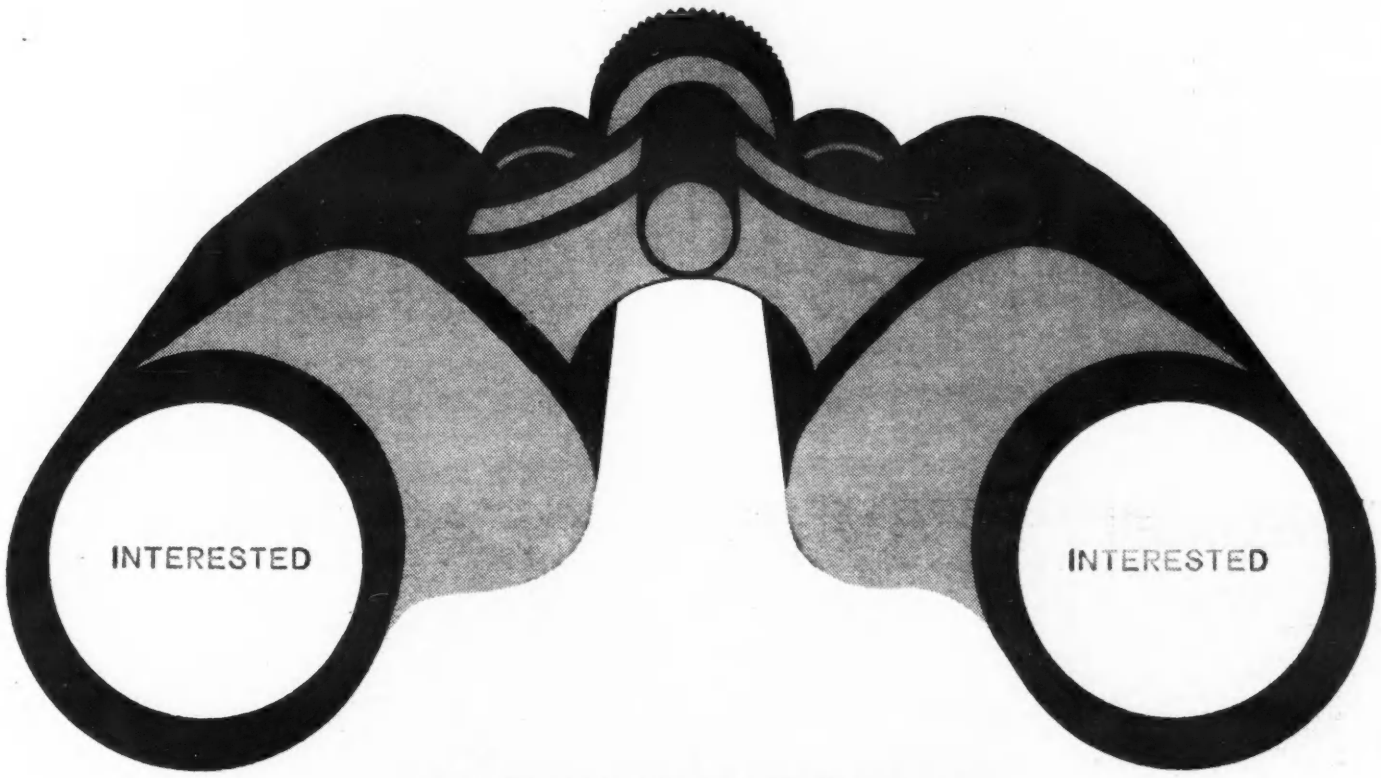


INTERESTED

A deep interest in the problems of pharmaceutical manufacturers has helped the Cyanamid Fine Chemicals Department develop a number of new products and ideas for clients. This interest, of course, is backed by the research and production facilities of the company. Whatever your problem—in formulation, new product development, production capacity—"Fine Chemicals" can offer a critical study of the situation with technical assistance of the highest calibre.

Vitamins, sulfonamides, antibiotics, Intrinsic factor concentrate and other bulk pharmaceuticals. Complete custom synthesis service.

CYANAMID

AMERICAN CYANAMID COMPANY
FINE CHEMICALS DEPARTMENT
30 Rockefeller Plaza, New York 20, N.Y.

Calcium Carbide—CMC

Calcium carbide, standard generator size, 600-lb. dms., c.l., dlvd ton. 149.00 - —
Calcium carbonate, nat., dry-grd., air floated, 325 mesh, bgs., c.l., works ton. 10.50 - —
chalk, whiting, 325 mesh, bgs., c.l., works ton. 32.00 -34.00
water-grd., ½ to 10 microns, bgs., c.l., works ton. 30.00 - —
10 to 20 microns, bgs., c.l., works ton. 17.00 -18.00
Calcium carbonate, precip., dense, bgs., c.l., works ton. 30.00 -38.50
bgs., l.c.l., works ton. 45.00 -53.50
medium, bgs., c.l., works ton. 38.00 - —
bgs., l.c.l., works ton. 48.00 -53.00
surface treated, bgs., c.l., works. ton. 42.00 -44.00
bgs., l.c.l., works ton. 57.00 -59.00
ultrafine, bgs., c.l., works ton. 117.50 -167.50
bgs., l.c.l., works ton. 137.50 -187.50
Calcium chloride, conc., flake or pellet, 94-97%, paper bgs., c.l., works, frt. equald. ton. 39.30 - —
Flake, 77-80%, paper bgs., c.l., works, frt. equald ton. 32.00 - —
Liquor, 40%, tanks, frt. equald. ton. 12.50 - —
Powd., 77% min., paper bgs., c.l., works, frt. equald ton. 37.00 - —
Purif., gran., dms. lb. .27 - —
Solid, 73-75%, dms., c.l., frt. equald ton. 29.50 - —
dms., l.c.l., works, frt. equald. ton. 36.00 -73.00
USP, gran., dms. lb. .32 - —
Calcium chromate, bgs., dlvd lb. .37 - —
Calcium cyanide, dms., c.l., dlvd. E. of Rockies lb. .20 - —
dms., l.c.l., same basis lb. .24 - .55
Calcium cyclamate, 100-lb. dms lb. 1.95 - —
Calcium gluconate, USP, AA grade, 100-lb. dm., ton lb. .73½ - —
USP, powd., 100-lb. dm., ton lb. .66½ - —
Calcium hydride, lump, dms., works. lb. 2.20 - 3.00
Calcium hypochlorite, high test, gran., 45-lb. cs., dlvd. E. of Rockies cs. 23.85 -25.60
100-lb dms., same basis dm. 33.30 -36.55
Calcium hypophosphite, dms., 1,000-lb. lots lb. 1.23 - —
Calcium iodide, jars lb. 4.52 - —
Calcium lactate, NF, dms., f.o.b. works lb. .43 - .46
Calcium mandelate, USP, 150-lb. dm., works lb. 3.25 - —
Calcium naphthenate, liq., 4% Ca., dms., frt. equald lb. .30 - —
Calcium pantothenate, USP, jars, 1 kilo or more kilo. 35.00 - —
Calcium para-aminosalicylate (see Calcium p-aminosalicylate).
Calcium phenosulfonate, dms lb. 1.24 - 1.25
Calcium phosphate, dibasic, USP, bgs., c.l., frt. equald 100 lbs. 16.00 - —
Dibasic, feed grade, 18½% P, bgs., c.l., t.l., frt. equald ton. 86.00 - —
bgs., c.l., t.l., f.o.b. Texas City works ton. 80.50 - —
bgs., l.c.l., frt. equald ton. 95.00 - —
Dibasic, feed grade, 21% P., bgs., c.l., t.l., frt. equald ton. 97.65 - —
bgs., l.c.l., frt. equald ton. 107.65 - —
Prices of calcium phosphate dibasic in bulk $3 per ton less than bgs., c.l., prices.
Calcium phosphate, monobasic, bgs., 10,000-lb. lots, frt. equald. 100 lbs. 7.45 - —
bgs., smaller lots, same basis. 100 lbs. 7.95 - —
Tribasic, NF, precip., bgs., c.l., works, frt. equald 100 lbs. 9.25 - —
bgs., l.c.l., frt. equald. 100 lbs. 10.00 - —
Calcium phytate, bgs., 50 lbs. or more, f.o.b. warehouse N. Y lb. .39 - —
Calcium resinate, precip., dms., ton lots, frt. alld., works lb. .40¼ - —
Calcium silicate, hydrated, bgs., c.l., works lb. .05 - —
bgs., l.c.l., works lb. .06½ - —
Calcium silicate paint grade (see Wollastonite).
Calcium stearate, ctns., c.l. lb. .39 - —
ctns., l.c.l. lb. .40 - .44
Calcium sulfate (see Gypsum).
Calomel, NF, mild, powd., dms., 100-lbs., f.o.b. works lb. 5.42 - —
NF, mild, precip., dms., 100-lbs., f.o.b. works lb. 5.67 - —
Camphene, 46° m.p., dms. incl., c.l., works lb. .15 - —
dms. incl., l.c.l. same basis lb. .16½ - —
tanks, same basis lb. .12½ - —
Camphene chlorinated, 67-69% (see Toxaphene).
Camphor, monobromated, NF, dms., kgs lb. 3.63 - 3.70
Nat., USP, powd., cs., 100-lb. lots. lb. .60 - .65
tablets, 1-oz. cs. lb. .85 - .90
Nat., USP, gran., bbls., 2,000-lb. lots lb. .59 - —
Syn., tech., 1 bbl. or more lb. .48 - —
Syn., USP, gran., powd., bbls., 1,000-lb lots lb. .60 - —
bbls., smaller lots lb. .61 - —
tablets, ctns., 1,000-lb. lots. lb. .85 - —
ctns. 500-lb. lots lb. .86 - —
ctns., smaller lots lb. .87 - —
Camphor oil, sassafrassy, dms. lb. .35 - .55
White, dms. lb. .26 - .50
Cananga oil, native, cns. lb. 5.00 - 6.50
Rectified, cns. lb. 7.25 -10.00
Candelilla wax, crude, bgs. lb. .65 - .70
Refd., pure, bgs. lb. .70 - .71
Powdered Candelilla wax 20 to 100 mesh, 8c. higher.
Cantharides, Chinese, cs. lb. 1.00 - —
powd., bgs. lb. 1.15 - —
Russian, bgs. lb. 2.00 - 2.15
powd., bgs. lb. 2.15 - 2.30
Capric acid, dms. lb. .35½ - .38
tanks lb. .33 - .34½
Caprolactum monomer, bgs., c.l., t.l., f.o.b. works lb. .52 - —
bgs., l.c.l., l.t.l., same basis lb. .57 - —
tanks, same basis lb. .49 - —
Capryl alcohol, 85% dms., c.l., t.l., works lb. .19 - —
dms., l.t.l., same basis lb. .19½ - —
tanks, frt. equald. lb. .16½ - —
Sec., 92-99%, dms., c.l., f.o.b. works lb. .22 - —
dms., l.c.l., f.o.b. works lb. .23 - —
tanks, f.o.b. works lb. .19½ - —
Caprylic acid, dms. lb. .35½ - .38
tanks lb. .33 - —
Capsicum (see Pepper red).
Capsicum oil (see Capsicum oleoresin).
Capsicum oleoresin, NF, from dom. pepper, dms lb. 4.00 - —
NF, from African pepper, dms. lb. 4.50 - —

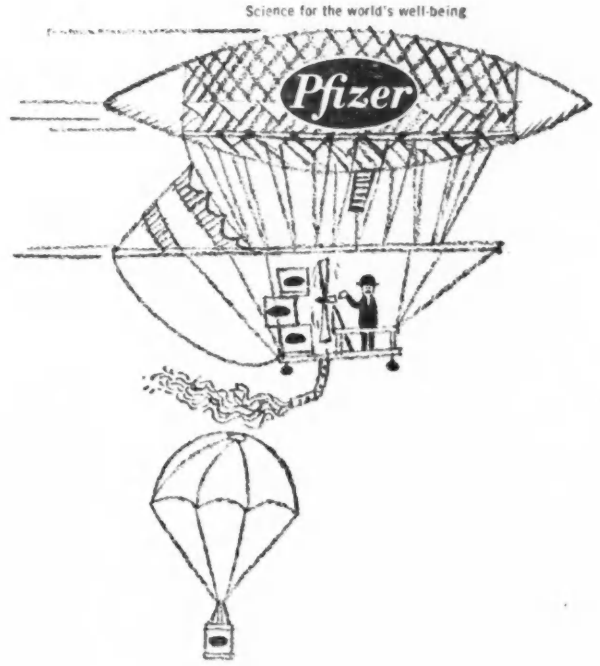
Caraway oil, NF, dms. lb. 3.15 - 3.40
Caraway seed, Danish, bgs. lb. .16 - —
Dutch, bgs. lb. .17½ - —
Polish, bgs. lb. .17¼ - —
Carbazole, 97%, bbls, ton lots, works lb. 1.05 - —
Carbon black, channel, rubber beads, bulk, c.l., works lb. .08 - —
bgs., c.l., works lb. .08½ - —
bgs., l.c.l., works lb. .16¼ - —
Furnace, fast extruding, bgs., c.l., works lb. .06¾ - —
ctns., l.c.l., whse. lb. .13½ - —
high abrasion, bulk, c.l., works. lb. .07¼ - —
bgs., c.l., works lb. .07¾ - —
bgs., l.c.l., dlvd. or whse lb. .14½ - —
high modulus, bgs., c.l., works. lb. .06¼ - —
ctns., l.c.l., whse. lb. .13 - —
semi-reinforcing, bgs., c.l., works lb. .05¾ - —
bgs., ctns., l.c.l., whse. lb. .12½ - —
Carbon black, pigment, high color beads, ctns., c.l., works. lb. .78 - —
ctns., l.c.l., dlvd. or whse lb. .87 - —
medium color, uncompressed, bgs., c.l., works lb. .14 - —
bgs., l.c.l., dlvd. or whse lb. .22½ - —
Carbon dioxide, indust., wholesale, bulk, 30,000-2,999,999 lbs., dlvd. Metropolitan areas, E ton. 60.00 -115.00
bulk, 3,000,000 lbs. or more, dlvd. Metropolitan areas, E ton. 55.00 - —
Solid, bulk, wholesale, works ton. 85.00 - —
Carbon disulfide, 55-gal. dms., c.l., works, frt. equald to competitive points lb. .071 - —
55-gal. dms., l.c.l., same basis lb. .086 - .091
5-gal. dms., 30 dms. to c.l., same basis lb. .131 - —
5-gal. dms., less than 30 dms., same basis lb. .161 - —
tanks, dlvd. lb. .0545 - —
Carbon tetrachloride, CP, consumers, dms., c.l., frt. alld. lb. .12¾ - —
dms., l.c.l., frt. alld. lb. .15¼ - —
Tech., consumers, dms., c.l., t.l., frt. alld lb. .11¾ - —
dms., l.c.l., l.t.l., frt. alld lb. .14¼ - —
tanks, frt. alld lb. .10¾ - .11¼
Carboxymethyl cellulose (see CMC).
Carbromal, NF, dms., 100-lb lots, works lb. 4.00 - 4.25
dms., smaller lots, works lb. 4.10 - 4.75
Cardamom oil, NF, bots. lb. 29.00 -42.00
Cardamom seed, bleached "A" lb. 3.20 - —
Bleached "B" lb. 3.10 - —
Decorticated Alleppey, cs. lb. 2.30 - —
Cuatemala, cs. lb. 3.15 - —
Green, Alleppey, bgs. lb. 2.35 - —
Ceylon, bgs. lb. 2.15 - —
Carmine No. 40, NF, bulk, 100-lb. lots or more, dlvd. lb. 16.80 - —
bulk, smaller lots, dlvd. lb. 16.90 -17.30
Carnauba wax, chalky, bgs., ton lots lb. .70 Nom.
North Country, No. 2, crude, bgs., ton lots lb. .80 Nom.
refd., pure, ton lots lb. .86 - .87
North Country, No. 3, Ceara, ton lots lb. .73 - .74
Ceara, refd., pure bgs., ton lots lb. .83 - .84
North country, No. 3, Parnahyba, ton lots lb. .74 - .75
Parnahyba, refd., pure, bgs., ton lots lb. .84 - .85
North Country, No. 1, Ceara, yellow, bgs., ton lots lb. 1.05 - 1.07
Parnahyba, yellow, bgs., ton lots lb. 1.08 - 1.10
Powdered carnauba wax, 20 to 100 mesh 8c. per lb. higher.
Carotene, tech., 1,350,000 A units per gram tins, 5-10 kilo lots, dlvd gram. .20½ - —
in carrot oil, 5,000,000 to 8,000,000 A units per lb., cms., works million units. .12 - —
USP, microcrystalline in oil, 400,000 A units per gram., dms., dlvd million units. .144 - —
b-Carotene, in vegetable oil, semi-solid suspension, 400,000 A units per gram, cns kilo. 57.60 - —
Liquid in vegetable oil, 500,000 A units per gram, cns. kilo. 72.00 - —
Pure, cryst., 1,600,000 to 1,670,000 A units per gram, cns. kilo. 240.00 - —
Carvol, bots. lb. 5.00 - 5.40
Cascara sagrada bark, bulk lb. .34 - .36
Casein, dom., edible, acid precip., 20 mesh., bgs., 10,000-lb. lots or more, works lb. .56 - —
edible, acid, precip., 80 mesh, bgs., 10,000-lb. lots or more, works lb. .64 - —
Imp., inedible, acid-precip., gro., Argentine, bgs., c.l., ex-dock, Eastern seaports lb. .18¾ - .19
New Zealand, bgs., c.l., same basis lb. .24 - —
Cashewnut shell, liquid, treated, dms., c.l., Newark, N. J. lb. .22 - —
dms., ton lots, same basis lb. .23 - —
dms., ton lots, same basis lb. .25 - —
Cassella acid, dms., frt. alld., 100% basis lb. 1.44 - 1.75
Cassia oil, redist., USP, cns. lb. 8.50 -11.00
Cassia, Padang, "A," bls. lb. .30 - —
"B," bls. lb. .29 - —
"C," bls. lb. .28 - —
Korintje "A," bls. lb. .34 - —
"B," bls. lb. .30 - —
"C," bls. lb. .30 - —
Castor oil, dom., blown, dms., c.l. lb. .2550 - —
dms., l.c.l. lb. .2650 - —
dehydrated, bodied, dms., c.l. lb. .2700 - —
dms., l.c.l. lb. .2850 - —
tanks lb. .2500 - —
dehydrated, unbodied, dms., c.l. lb. .2500 - —
dms., l.c.l. lb. .2660 - —
tanks lb. .2360 - —
hydrogenated, bgs., c.l. lb. .2450 - —
bgs., ton lots lb. .2850 - —
bgs., l.c.l., dlvd. lb. .3050 - —
No. 1, dms., c.l. lb. .2150 - —
dms., l.c.l. lb. .2300 - —
tanks lb. .2000 - —
No. 3, tech., dms., c.l. lb. .2125 - —
dms., c.l. lb. .2225 - —
tanks lb. .1925 - —
Refd., deod., dms., c.l. lb. .2550 - —
dms., l.c.l. lb. .2750 - —
Refd., deod., dms., c.l. lb. .2650 - —
dms., l.c.l. lb. .2750 - —
USP, dms., c.l. lb. .2350 - —
dms., l.c.l. lb. .2450 - —
tanks lb. .2150 - —
Imported, No. 1, Braz., tanks lb. .18 - —
Sulfonated, 50%, dms., works lb. .15 - .15½
75%, dms., works lb. .19 - .19½
Castor oil acids, dehydrated, dms. lb. .44¼ - .46¼
Split, dms. lb. .37¼ - .38¼

Castor pomace, bgs., c.l., works ton. 35.00 - —
Castoreum nat., cns. lb. 5.25 - —
Syn., cns. lb. 9.00 - —
Catechol, CP, cryst., fib., dms., works lb. 2.17½ - —
Resub., dms., works lb. 4.29½ - —
Catnip leaves, Southern, bls. lb. Nominal.
Caustic potash (see Potash caustic).
Caustic soda (see Soda, caustic).
Cedarleaf oil, USP XIII cns., dms. lb. 2.50 - 3.10
Cedarwood oil, cns., dms. lb. .65 - .70
Celery seed, French, bgs. lb. .33 - —
Indian, bgs. lb. .19 - —
Cellulose acetate, flake, powd., bgs., t.l., dlvd. E lb. .36 - .51
Cellulose acetate-butyrate, powd., 17% butyryl content, bgs., dlvd. E lb. .545 - .555
27% butyryl content, bgs., dlvd. E lb. .595 - .605
38% butyryl content, bgs., dlvd. E lb. .545 - .555
38% butyryl content, half-second, bgs., dlvd. E lb. .545 - .555
50% butyryl content, bgs., dlvd. E lb. .585 - .595
Cellulose gum, methyl (see Methyl Cellulose).
Cellulose gum, pure, high vis., bgs., 23,000-lb. lots or more works, frt alld lb. .57 - —
bgs., smaller lots, same basis lb. .59 - —
Cerium chloride (see Rare Earth Chloride).
Cerium chloride, 46%, dms., dlvd lb. .25 - —
Cerium hydrate, 74% CeO, fib. dms., 100-lb. lots or more lb. 1.40 - —
77% CeO, fib. dms., 100-lb. lots or more lb. 1.74 - —
Cerium oxalate (see Rare earth oxalate).
Cerium oxide, optical grade, bgs., 50-lb. lots or more, dlvd. lb. 1.85 - 1.90
bgs., smaller lots, dlvd. lb. 2.15 - —
Cetyl alcohol, NF, fib. cns., c.l., t.l., dlvd. E lb. .41½ - —
fib. cns., l.c.l., same basis lb. .43½ - —
tanks, same basis lb. .39 - —
Extra, cns., c.l., t.l., dlvd. E lb. .48½ - —
fib. cns., l.c.l., same basis lb. .50½ - —
tanks, same basis lb. .46 - —
Chalk (see Calcium carbonate).
Chamomile flowers, Hungarian, bls lb. 1.10 - —
Roman, cs. lb. 1.50 - 1.75
Chamomile oil, blue Hungarian, bots lb. 350.00 - —
Charcoal, activated, NF, fib. dms., c.l., works lb. .25 - .32
fib. dms., 5-ton lots, works lb. .26½ - .32½
fib. dms., smaller lots, works lb. .27 - .50
Charcoal, black (see Charcoal, activated).
Charcoal, bone (see Bone black).
Charcoal, hardwood, lump, bulk, c.l., f.o.b. plant ton. 55.00 - —
briquets, bulk, c.l., f.o.b. plant ton. 78.00 -80.00
5-lb. paper bgs., c.l., same basis ton. 106.00 - —
25-lb. paper bgs., c.l., f.o.b. plant ton. 87.00 - —
40-lb. paper bgs. c.l., same basis ton. 84.00 - —
Chenopodium oil, NF, cns. lb. 4.15 - 5.00
Chicago acid, paste, bbls., frt. alld. lb. 3.21 - —
Chinawood oil (see Tung oil).
Chloral, tech., 94% min., dms., c.l., works lb. .23 - —
dms., l.c.l., works lb. .24 - —
tanks, multiple units, 5 cars, dms., l.c.l., works lb. .21 - —
Chloral hydrate, USP, jars, 1,000-lb. lots lb. 1.00 - —
jars, 500-lb. lots lb. 1.03 - —
jars, 100-lb. lots or less lb. 1.05 - —
Chlordan, agricultural, dms., c.l., frt. alld lb. .65 - —
dms., l.c.l., 5,000-10,000-lb. lots, frt. alld lb. .66 - —
Clarified, dms., c.l., frt. alld lb. .69 - —
dms., l.c.l., 5,000-10,000-lb. lots, frt. alld lb. .70 - —
Chlorinated paraffin, 42%, dms., c.l., frt. alld lb. .16¾ - —
dms., l.c.l., 10 dms. or more, same basis lb. .17¼ - —
70%, dms., c.l., same basis lb. .18½ - —
dms., l.c.l., 10 dms. or more, same basis lb. .19½ - —
Chlorinated rubber, 5, 10, 20 cps., ctns., c.l., works lb. .60 - —
ctns., l.c.l., works lb. .61 - —
125, 1,000 cps., ctns., c.l., works. lb. .70 - —
ctns., l.c.l., works lb. .71 - —
Chlorine, liq., cyls., c.l., works, frt. equald lb. .11 - —
cyls., l.c.l., Metropolitan area lb. .12½ - .13¾
tanks, single units, works, frt. equald 100 lbs. 3.25 - —
tanks, multiple units, 5 cars, works, frt. equald 100 lbs. 4.15 - —
tanks, multiple units, 4 cars, same basis 100 lbs. 4.35 - —
tanks, multiple units, 2 cars, same basis 100 lbs. 5.35 - 5.85
tanks, multiple units, 1 car, same basis 100 lbs. 6.25 - 7.25
Chloroacetic acid, mono, flake, 99%, purif., dms., c.l lb. .23½ - .25½
dms., l.c.l. lb. .24½ - —
tech., flake, 96-97%, dms., c.l., dms., l.c.l., frt. equald lb. .20 - —
frt. equald lb. .19 - —
2-Chloro-4-aminotoluene, tech., liq., dms., frt. alld lb. 1.03 - —
4-Chloro-2-aminotoluene, fused, bbls. lb. 1.38 - —
6-Chloro-2-aminotoluene, tech., liq., dms., frt. alld lb. .66 - —
m-Chloroaniline, dms., c.l., frt. alld. lb. .75 - —
dms., l.c.l., same basis lb. .77 - —
tanks, same basis lb. .73 - —
o-Chloroaniline, dms., c.l., frt. alld. lb. .52 - —
dms., l.c.l., same basis lb. .54 - —
tanks, same basis lb. .50 - —
p-Chloroaniline, dms., c.l., frt. alld. lb. .77 - —
dms., l.c.l., same basis lb. .79 - —
o-Chlorobenzaldehyde, dms., t.l., works lb. 1.05 - —
dms., l.t.l., same basis lb. 1.20 - —
p-Chlorobenzaldehyde, dms., l.c.l., works lb. 1.95 - —
o-Chlorobenzoic acid, fib. dms., t.l., works lb. 1.10 - —
fib. dms., smaller lots, works lb. 1.25 - —
p-Chlorobenzoic acid, fib. dms., 2,000-lbs. or more, works. lb. 2.25 - —
fib. dms., less than 2,000-lbs., same basis lb. 2.30 - —

Chloroform, tech., dms., c.l., dlvd. E lb. .18 - —
dms., l.c.l., same basis lb. .19 - —
tanks, same basis lb. .17 - —
USP, dms., c.l., dlvd. lb. .27 - —
dms., l.c.l., dlvd. lb. .30 - —
tanks, minimum 4,000 gals. dlvd. lb. .25 - —
2-Chloro-4-nitroaniline, paste, dlvd. E., 100% basis lb. .81 - —
Powd., dlvd. E., 100% basis lb. .86½ - —
4-Chloro-2-nitroaniline, powd., dlvd. E lb. .86 - —
4-Chloro-2-nitrophenol, tech., paste, dms., frt. alld lb. .75 - —
4-Chloro-2-nitrotoluene, tech., solid, dms., frt. alld lb. .99 - —
6-Chloro-2-nitrotoluene, tech., solid, dms., frt. alld lb. .17 - —
o-Chlorophenol, dms., c.l., frt. equald lb. .37 - —
dms., l.c.l., same basis lb. .38 - —
p-Chlorophenol, dms., c.l., frt. equald lb. .37 - —
dms., l.c.l., same basis lb. .38 - —
Chloropicrin, coml., cyls., 180 lbs., frt. alld lb. 1.07 - —
cyls., 100 lbs., same basis lb. 1.08 - —
cyls., 50 lbs., same basis lb. 1.14 - —
Chlorosulfonic acid, dms., c.l., frt. equald lb. .0405 - —
dms., l.c.l., frt. equald lb. .0515 - —
tanks, frt. equald lb. .0415 - —
Chlorosulfonic acid, in stainless steel dms. ½c. per lb. higher
o-Chlorotoluene, tech., dms., t.l., works lb. .37 - —
dms., l.c.l., t.l.l., same basis lb. .38 - —
Choline bitartrate, fib. dms., frt. adjusted kilo 2.75 - 3.00
Choline chloride, fib. dms., frt. adjusted kilo. 2.75 - 3.00
Choline dihydrogen citrate, fib. dms., frt. adjusted kilo. 2.75 - 3.00
Chrome green, CP, dark, light, medium blue content, 1-15%, bbls., dlvd. E. of Rockies, blue content, 16-30%, bbls., same basis lb. .43 - —
Chrome green, CP, dark, light, medium blue content, 41-45%, bbls., same basis, blue content, 45-49%, bbls., same basis lb. .44 - —
Reduced color 25%, bbls., same basis lb. .45 - —
Chrome green prices 1c. higher W. of Rockies.
Chrome orange, CP, bbls., dlvd. E of Rockies lb. .35 - —
Chrome orange prices 1c. higher W. of Rockies.
Chrome yellow, CP, bbls., dlvd. E. of Rockies lb. .35 - —
Chrome yellow price 1c. higher W. of Rockies.
Chromic acid, 99¾%, dms., c.l., works, frt. equald lb. .29½ - —
dms., l.c.l., dlvd. N. Y. Metropolitan area lb. .30 - .31
Chromic acid, NF (see Chromium trioxide).
Chromium acetate, soln., 7½%, dms., 500-2,000-lb. lots, works. lb. .10 - —
Chromium fluoride, bbls., works lb. .51 - .52
Chromium oxide, hydrated, bbls., fib. dms., c.l., frt. alld. lb. 1.20 - —
Pure, bgs., c.l., frt. alld lb. .44½ - —
bgs., l.c.l., same basis lb. .45½ - —
Chromium trioxide, NF, bots lb. 1.15 - —
Cinchona bark, NF, red, broken, bgs lb. .25 - —
NF, yellow broken, bgs lb. .35 - .40
Cinnamic acid, refd., bots lb. 2.50 - 3.50
Cinnamic alcohol, bots lb. 1.75 - 2.20
Cinnamic aldehyde, dms. lb. .80 - 1.00
Cinnamon, Ceylon, No. 2, bgs lb. .62 - —
Ceylon, No. "0000," bgs lb. .78 - —
Cinnamon bark oil, bots lb. 36.00 -70.00
Cinnamon leaf oil, crude, dms lb. 1.60 - 2.00
USP, (Cassia), cns., dms lb. 8.50 -13.50
Citral, CP, bots. lb. 3.60 - 4.00
Extra, bots. lb. 4.50 - 6.10
Citric acid, USP, anhyd., fine gran., bgs., dms., c.l lb. .29½ - .30
bgs., dms., 10,000-lb. lots, 1 shipt lb. .30 - .30½
bgs., dms., smaller lots lb. .30½ - .31
USP, hydrous, fine gran., bgs., dms., c.l lb. .27½ - .28
bgs., dms., 10,000-lb. lots, 1 shipt lb. .28 - .28½
bgs., dms., smaller lots lb. .29 - .29½
Powdered citric acid ½c. per lb. higher.
Citronella oil, Ceylon, dms. lb. 1.10 - 1.25
Java-type, dms. lb. 1.00 - 1.30
Citronellal, bots., dms. lb. 1.60 - 2.10
Citronellol, bots., dms. lb. 1.90 - 2.50
Civet, artif., bots lb. 13.75 -15.00
Nat., bots. oz. 8.50 -15.00
Clay, ball., dom., airfloated, bgs., c.l., Tenn ton. 17.50 -21.50
crushed shed moisture, bulk, c.l., Tenn ton. 8.00 -11.00
Imp., airfloated, bgs., c.l., Atl. port net-ton. 42.00 -45.75
lump, bulk, Atl. port net-ton. 29.50 -35.75
Clay, China, dom., dry-grd., air floated, 99% 325 mesh, Georgia, bgs., c.l., works. ton. 10.00 -12.00
Georgia, bgs., l.c.l., works. ton. 15.50 - —
dom., airfloated, 99% 300 mesh bgs., c.l., Georgia, works. ton. 13.50 -14.50
bgs., l.c.l., ex-whse ton. 35.00 -36.00
Imp., white, lump, bulk, c.l. ex-dock, Philadelphia, Portland, Me long-ton. 20.00 -35.00
white, powd., bgs., c.l., ex dock. net-ton. 50.00 - —
bgs., l.c.l., ex whse net-ton. 60.00 -70.00
Cleaners naphtha, petroleum, 105 F Flash, tankcars, New Jersey and New York gal. 18 - —
Group 3 gal. .12875 - —
Houston, Texas gal. .145 - —
140 F Flash, tankcars, New Jersey or New York gal. .205 - —
Group 3 gal. .154 - —
Houston, Texas gal. .17 - —
Cleve's acid, tech., mixed, solid, dms., frt. alld lb. 1.05 - —
1.6, tech., solid, dms., frt. alld lb. .77 - —
1.7, tech., dms., frt. alld lb. 2.20 - —
Cloves, Madagascar, bgs lb. .40½ - —
Zanzibar, bgs. lb. .42½ - —
Clove bud oil, USP, dms lb. 2.70 - 3.60
Clove leaf oil, crude, dms lb. 1.30 - 1.70
CMC, crude, 96.4% low or medium vis., bgs. or fib. dms., 23,000 lbs., dlvd. E., 100% basis lb. .41½ - —
96.4% low. or medium vis., bgs. or fib. dms., less than 23,000 lbs., dlvd. E., 100% basis lb. .43½ - —
65% low or medium vis., bgs., or fib. dms., c.l., dlvd. E., 100% basis lb. .41½ - —
bgs. or fib. dms., l.c.l., dlvd. E., 100% basis lb. .43½ - —
CMC, purif., high vis. (see Cellulose gum).
CMC, standard, low or medium vis., bgs., 23,000 lbs., works, frt. alld lb. .57 - —
bgs., smaller lots, same basis. lb. .59 - —
CMC prices W. of the Rockies are 2c. per lb. lower and are on a works basis.

Coaltar, crude, resale for soln., tanks, works	gal.	.17	—
Refd., resale, indust., dms., c.l., ex whse	gal.	.35	—
dms., l.c.l., ex whse	gal.	.39	—
tanks, works	gal.	.20½	—
Coaltar pitch, aluminum, bulk, works.	ton.	44.00	—
Carbon and indust., bulk, works.	ton.	44.00	—
Core, bulk, works	ton.	40.50	—
Fiber, bulk, works	ton.	48.00	—
Roofing, 140-155 °F., Federal Specification RP-381 Type 1, tanks, works	ton.	41.00	—
Cobalt acetate, 23.7% Co., dms., dlvd	lb.	1.04	—
Cobalt blue, genuine, 250 lb. bbls., dlvd. E. of Rockies	lb.	4.90	—
Cobalt blue prices 1c. higher W. of Rockies.			
Cobalt blue, imitation (see Ultramarine blue).			
Cobalt carbonate, 48% Co., powd., bgs., dlvd	lb.	1.45	—
Cobalt chloride, 24.2% Co., dms., dlvd	lb.	.99	—
Cobalt hydrate, 60-61% Co., dms., dlvd	lb.	2.05	—
Cobalt linoleate, fused 8½% Co., dms	lb.	.71½	—
Liq., 6% Co., dms	lb.	.57½	—
Cobalt metal, 99% dms., f.o.b. carrier	lb.	1.50	—
Cobalt naphthenate, liq., 6% Co., dms., dlvd	lb.	.48¾	—
Cobalt nitrate, 20.1% Co., bbls., dlvd.	lb.	.80	—
Cobalt oxide, black, ceramic grade, 72½-73½% Co., kgs., dlvd. E. of Mississippi R.	lb.	1.15	—
70-71% Co., kgs., same basis	lb.	1.12	—
Cobalt oxide prices W. of Mississippi R. 3c. per pound higher.			
Cobalt phosphate, powd., 32.1% Co., dms., dlvd	lb.	1.35	—
Cobalt resinate, fused, 3% Co., dms.	lb.	.33½	—
Cobalt sulfate, cryst., 21% Co., dms., dlvd	lb.	.64	—
Monohydrated, 33% Co., dms., dlvd	lb.	1.09	—
Cobalt tallate, 6% Co., dms., dlvd.	lb.	.44	—
Cocaine, USP, cns., 100-oz. lots, f.o.b. works	oz.	17.50	—
Cocaine hydrochloride, cns., 100-oz. lots, f.o.b. works	oz.	13.75	—
Cocillana bark, bls	lb.	.18	.20
Cocoa butter, bgs	lb.	.56	.61
Coconut oil, crude, tanks, New York	lb.	.16½	—
tanks, Pac. coast	lb.	.14½	—
Refd., deodorized, dms.	lb.	.23	.23½
Coconut oil acids, dist., dms.	lb.	.28¼	.30¾
tanks	lb.	.25¾	—
Double dist. (stripped), dms.	lb.	.29¼	.33
tanks	lb.	.26¾	—
Cod oil, dms., spot	lb.	.03⅜	.08½
Codeine, NF, cns., 100-oz. lots	oz.	13.25	—
Codeine hydrochloride, cns., 100-oz. lots	oz.	11.75	—
Codeine phosphate, USP, cns., 100-oz. lots	oz.	10.25	—
Codeine sulfate, USP, cns., 100-oz. lots	oz.	10.75	—
Codliver oil, USP, dms	gal.	1.40	1.70
Cohosh root, black, bls	lb.	.20	.25
Blue, bls.	lb.	.20	.25
Colchicine, USP, bots	oz.	29.00	—
Colchicum root, bls	lb.	.35	.45
Colchicum seed, bgs	lb.	1.00	1.25
Collodion, USP, dms	lb.	.32½	—
USP, flexible, dms	lb.	.54	—
Colocynth pulp, bls.	lb.	.75	—
Colombo root, bls	lb.	.16	.18
Condurango bark, bls	lb.	.18	.20
Congo copal gum, No. 1, bgs	lb.	.25	.27
No. 2, bgs	lb.	.22	.24
No. 3, bgs.	lb.	.17	.20
Copaiba balsam, cns., dms	lb.	.60	.65
Copaiba oil, cns	lb.	1.35	2.00
Copper acetate, bbls., c.l., works.	lb.	.53	—
bbls., l.c.l., works	lb.	.54	—
Copper carbonate, 55%, bgs., c.l., works	lb.	.3635	—
bgs., l.c.l., works	lb.	.3785	—
Copper chloride, cupric, anhyd., dms., works	lb.	.45½	.46
cryst., dihydrate, dms., works.	lb.	.31	.31½
cryst., dried, dms., works	lb.	.39¼	.39¾
Copper chloride, cuprous, dms., works	lb.	.4135	.4435
Copper cyanide, tech., dms., 20,000-lb. lots or more	lb.	.609	—
dms., 1,000-lb. lots or more	lb.	.619	—
dms., smaller lots	lb.	.639	.65
Copper gluconate, dms	lb.	3.20	—
Copper hydrate, dms., c.l., frt. alld. E. of Miss	lb.	.53½	—
dms., l.c.l., same basis	lb.	.54	—
Copper metal, electrolytic, dlvd. Valley basis	lb.	.33	.36
Copper naphthenate, liq., 8% Cu, dms, frt. alld	lb.	.26½	—
Copper nitrate, tech., cryst., dms., works	lb.	.30¾	.32¾
Copper oleate, solid, 9% Cu, dms., works	lb.	.45	—
Copper oxide, black, bbls., 100-5,000-lb lots, works	lb.	.49¼	—
Copper oxide, red, 97%, USN Type 1, bbls., 100-5,000-lb. lots.	lb.	.50½	—
90%, USN Type II, bbls., 100-5,000-lb. lots or more, works.	lb.	.48½	—
Copper quinolinolate, 18% Cu, dms., ton lots	lb.	4.25	—
10% active quinolinolate, dms	lb.	1.14	1.15
Copper resinate, precip., dms., frt. alld	lb.	.41½	—
Copper sulfate, CP, gran., dms., works	lb.	.1885	—
Cryst., 99%, bgs., c.l., works. 100 lbs.		13.00	—
bgs., l.c.l., works 100 lbs.		13.25	15.75
Monohydrated, 35%, dms., c.l., works 100 lbs.		24.00	—
dms., l.c.l., works 100 lbs.		24.75	—
Tribasic, distributors, bgs., c.l., works 100 lbs.		29.60	—
bgs., l.c.l., works 100 lbs.		31.10	—
Copper undecylenate, dms	lb.	2.75	—
Copra, Atl., Gulf ports, c.i.f.	lb.	202.50	—
Pac. ports, c.i.f.	lb.	197.50	—
Coriander oil, USP, bots	lb.	9.00	10.00
Coriander seed, Moroccan, bgs	lb.	.08	—
Rumanian, bgs.	lb.	.07½	—
Yugoslavian, bgs.	lb.	.08½	—
Corn oil, crude, tanks, works	lb.	.13	—
Foots (soapstock) acid 95%, tanks, New York	lb.	.04¾	—
Refd., salad, dms.	lb.	.1873	.19
tanks	lb.	.1673	—
Corn oil acids, dist., dms.	lb.	.15¾	.18¼
tanks	lb.	.13¼	—
Corn sugar, tanners, chipped, paper bgs., c.l., 60,000 lbs. min. 100 lbs.		7.30	—
paper bgs., l.c.l. 100 lbs.		7.45	—
Corn syrup, 42° Be., non-ret. dms., c.l. 100 lbs.		7.31	—
non-ret. dms., l.c.l. 100 lbs.		7.46	—
Corrosive sublimate (see Mercuric chloride).			
Cortisone acetate, USP, bots., kilo or more	gram	1.05	1.90
Costus oil, bots	oz.	6.00	—
Cottonseed meal, 41%, bgs., Memphis	ton.	38.00	—
Cottonseed oil, crude, tanks, South East	lb.	.10¼	.10¼
tanks, Valley	lb.	.10	—
tanks, Texas, Waco	lb.	.10	—
tanks, Texas, Lubbock	lb.	.09⅞	—
Foots (soapstock), acid, 95%, tanks, New York	lb.	.03¾	—
Refd., salad, dms.	lb.	.15⅛	.15¼
tanks	lb.	.13⅛	—
Cottonseed oil acids, dist., dms.	lb.	.15¾	.18¼
tanks	lb.	.13¼	—
Coumarin, NF, cryst., dms	lb.	3.30	3.40
Cramp bark, NF, bls	lb.	.90	1.00
Cream of tartar (see Potassium bitartrate).			
Creosote carbonate, NF, bots., cbys.,	lb.	3.05	3.26
Creosote, coaltar, crude, tanks, works, frt. adjusted	gal.	.24	—
Crude, soln. 80%, tanks, works.	gal.	.226	—
Refd., dms., c.l., works	gal.	.50	—
dms., l.c.l., same basis	gal.	.62	—
tanks, same basis	gal.	.38	—
West Coast creosote prices computed on a basis of 24c. per gallon for straight oil and 20c. per gallon for coaltar.			
Creosote, beechwood, cbys., dms., f.o.b. works, dlvd. in Metropolitan area	lb.	1.72	1.77
Hardwood, NF, cbys., dms., same basis	lb.	1.42	1.47
Pinewood, dms., incl., c.l., works.	lb.	.0561	—
dms., incl., l.c.l., works	lb.	.0634	—
dms., incl., l.c.l., ex whse, New York	lb.	.0745	—
tanks, works	lb.	.0460	—
Creosote oil (see Creosote coaltar).			
Cresol, tech., 50% below 204 °C., dry above 207 °C., wide distillation range, non-ret. dms., c.l., frt. alld	lb.	.16½	—
non-ret. dms., l.c.l., same basis	lb.	.17½	—
tanks, same basis	lb.	.145	—
Cresol, USP, non-ret. dms., c.l., same basis	lb.	.18	—
non-ret. dms., l.c.l., same basis.	lb.	.19	—
tanks, same basis	lb.	.16	—
m-Cresol, 95-98%, dms., c.l., works.	lb.	.60	—
dms., l.c.l., works	lb.	.61	—
m-p-Cresol, 5-95% 3 °C., dms., c.l., frt. equald	lb.	.18	—
dms., l.c.l., same basis	lb.	.19	—
tanks, same basis	lb.	.16	—
2.97% 2 °C., dms., c.l., frt. equald.	lb.	.22	—
dms., l.c.l., same basis	lb.	.23	—
tanks, same basis	lb.	.20	—
o-Cresol 30.5 °C. m.p. and over, ret. dms., c.l., frt. equald	lb.	.17	—
ret. dms., l.c.l., same basis	lb.	.18	—
tanks, same basis	lb.	.15	—
30 °-30.49 °C. m.p., dms., c.l., frt. equald	lb.	.16½	—
ret. dms., l.c.l., same basis	lb.	.17½	—
tanks, same basis	lb.	.14½	—
29 °-29.9 °C. m.p., dms., c.l., frt. equald	lb.	.16	—
ret. dms., l.c.l., same basis	lb.	.17	—
tanks, same basis	lb.	.14	—
25 °-28 °C. m.p., dms., c.l., frt. equald	lb.	.15	—
ret. dms., l.c.l., same basis	lb.	.16	—
tanks, same basis	lb.	.13	—
p-Cresol, 98%, dms., c.l., dlvd	lb.	.52	—
dms., l.c.l., dlvd	lb.	.53	—
tanks, dlvd.	lb.	.49	—
2,3-Cresotic acid, dms., ton lots, works	lb.	.70	—
dms., smaller lots, works	lb.	.72	—
p-Cresyl methyl ether, cns	lb.	1.80	2.05
Cresylic acid coaltar, dom., meta-para content above 25%, resins and tricresyl phosphate grades, dms., c.l., t.l., frt. equald	gal.	1.35	—
dms., l.c.l., same basis	gal.	1.40	—
tanks, same basis	gal.	1.15	—
Cresylic acid, coaltar, dom., meta-para content 25% or less, dms., c.l., t.l., same basis	gal.	1.20	—
dms., l.c.l., same basis	gal.	1.25	—
tanks, frt. equald	gal.	1.00	—
Cresylic acid, coaltar, imp., meta-para content 25% or less, f.o.b. works, frt. equald, to competitive points, 50 dms. or more	gal.	1.03½	—
less than 50 dms., same basis	gal.	1.05	1.15
tanks, same basis	gal.	1.00	—
Crotonaldehyde, 91-93%, dms., l.c.l, works	lb.	.25	—
Crotonic acid, dms., 200 lbs. or more, l.c.l., dlvd	lb.	.36	—
Cryolite, nat., indust., bgs., c.l., works 100 lbs.		13.00	—
bgs., l.c.l., works 100 lbs.		14.25	—
Cube root, powd., 5% rotenone, bgs., t.l., works	lb.	.21	—
bgs., l.t.l., works	lb.	.22	—

Science for the world's well-being



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Cubeb berries, NF, bgs. lb. 1.00 - —
Powd., cs. lb. 1.15 - —
Cubeb oil, cns lb.12.00 -16.00
Cumene, dms., c.l., works lb. .12 - —
dms., l.c.l., works lb. .14 - —
tanks, works lb. .11 - —
Cumin seed, Iranian, bgs. lb. .30 - —
Moroccan, bgs. lb. .31 - —
Turkish, bgs. lb. .27 - —
Cumin seed oil, bots., cns lb.15.50 -17.00
Cyanamide, fertilizer, mixing grade, 21% N, gran., bgs., Niagara Falls, Ont., contract. ton.57.00 - —
Fertilizer, pulv., 21% N, bgs., works unit-ton. 2.85 - —
Indust. grade, bgs., c.l. works. ton.75.00 - —
bgs., l.c.l., works ton.96.00 - —
Indust. grade, 6-16 mesh, dms., c.l., works ton.120.00 - —
dms., l.c.l., works ton.140.00 - —
Cyclohexane, 99% tech., dms., c.l., dlvd. E. of Rockies gal. 1.02 - —
dms., l.c.l., same basis gal. 1.10 - —
dms., c.l., dlvd. W. of Rockies gal. .77 - —
dms., l.c.l., same basis gal. .85 - —
tanks, works gal. .55 - —
98%, tech., 40-dm. lots or more, f.o.b. works gal. .56 - —
5-39 dms., same basis gal. .60 - —
tanks, same basis gal. .36 - —
Cyclohexanol, tech., dms., c.l., works, frt. alld. E lb. .28½- —
dms., l.c.l., works, same basis. lb. .29½- —
tanks, works, same basis lb. .26 - —
Cyclohexanone, tech., dms., c.l., works lb. .33½- —
dms., l.c.l., works lb. .34½- —
tanks, works lb. .31 - —
Cyclohexylamine, dms., c.l., works. lb. .49 - —
dms., l.c.l., works lb. .50 - —
tanks, works lb. .47 - —
Cypress oil, bots. lb. 5.30 - —

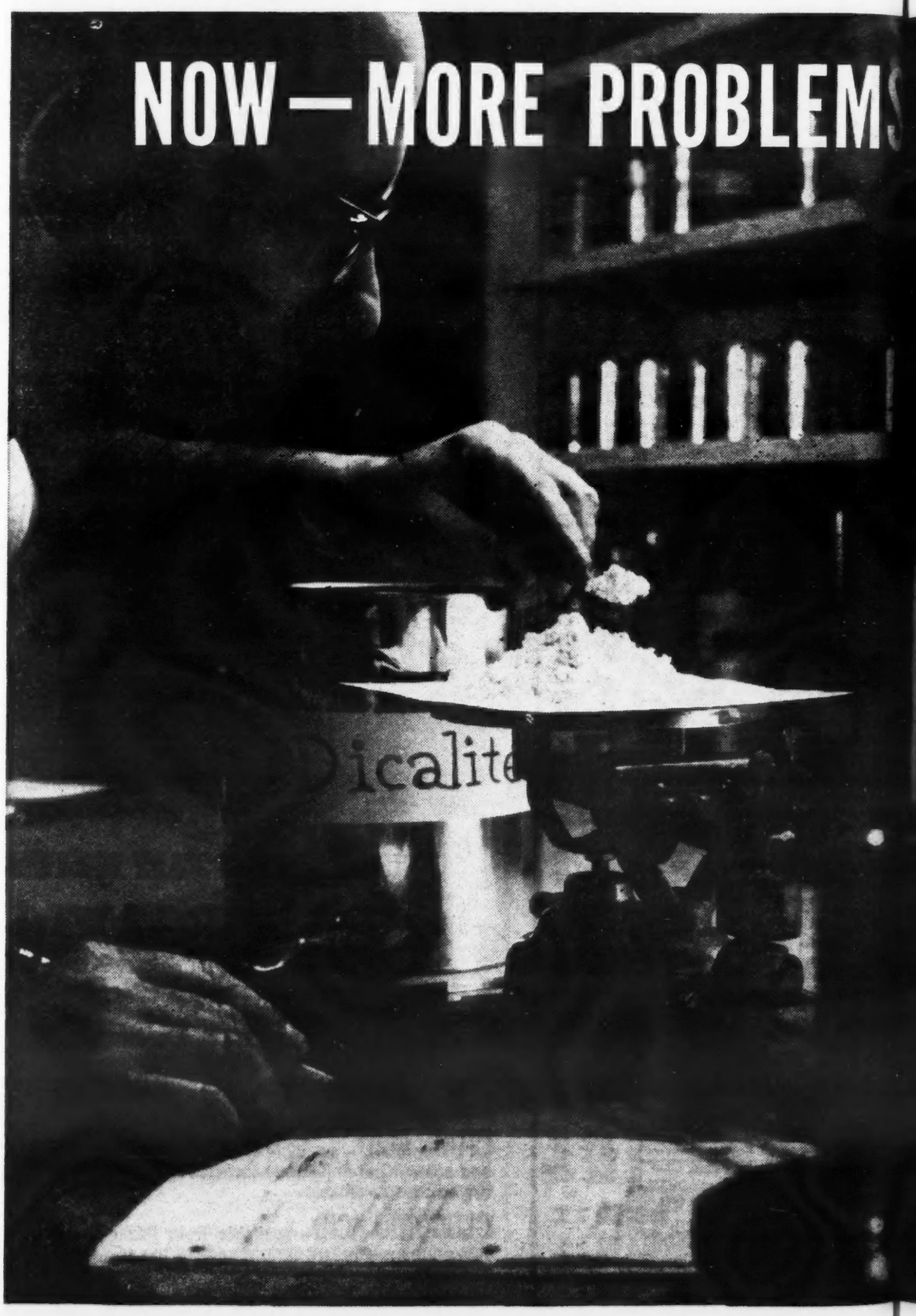
D

2,4-D, tech., bgs., dms., c.l., works, frt. equald. lb. .40 - —
bgs., dms., l.c.l., same basis lb. .45 - .49
2,4-D butyl ester, dms., c.l., works. lb. .43 - —
dms., l.c.l., same basis lb. .48 - .52
tanks, same basis lb. .42 - —
2,4-D isopropyl ester, dms., c.l., works lb. .43 - —
dms., l.c.l., works lb. .48 - .52
tanks, works lb. .42 - —
Dammar gum, Batavia, A E, cs lb. No stocks.
East India, Batu, bold, bgs. lb. .15 - .17
nubs and chips, bgs. lb. .09 - .10
black, bold, bgs. lb. .15 - .17
nubs and chips, bgs. lb. .12¼- .13½
unscraped, bgs. lb. .13 - .14½
pale, chips, bgs. lb. .15 - .17
pale, nubs, bgs. lb. .20¾- .24
Siam, cs. lb. .30 - .33
Singapore, No. 1, bgs. lb. .34 - .40
No. 2, bgs. lb. .29 - .32
No. 3, bgs. lb. No stocks.
dust, bgs. lb. .18 - .20
Dandelion root, bls. lb. .28 - .32
DDD, tech., flake, grd., fib. dms., c.l., works lb. .45 - .47
fib. dms., l.c.l., works lb. .46 - .48
DDT, flake or lump, bgs., c.l., dlvd lb. .23 - —
bgs., smaller lots, same basis. lb. .25 - —
fib. dms., c.l., same basis lb. .24 - —
fib. dms., smaller lots, same basis lb. .26 - —
Powdered DDT 1c. per pound higher.
DDVP (see Dimethyl dichlorovinyl phosphate).
1-Decanol, tech., dms., c.l., dlvd. E. lb. .43½- —
dms., l.c.l., dlvd. E. lb. .45½- —
tanks, dlvd. E. lb. .41 - —
Decyl alcohol, mixed isomers, dms., c.l., dlvd lb. .23½- —
dms., l.c.l., dlvd. lb. .25 - —
tanks, dlvd. lb. .21 - —
Perfume grade, bots. lb. 1.00 - 2.00
Decyl alcohol, normal (see 1-Decanol).
Deertongue leaves, bls. lb. .55 - .60
Defluorinated phosphate, feed grade, 18% P, paper bgs., c.l., t.l., works ton.53.00 - —
18% P, paper bgs., c.l., works. ton.66.25 -71.80
18% P, paper bgs., c.l., t.l., works, Houston, Tex ton.74.35 - —
Prices of defluorinated phosphate in bulk $3 per ton less than bg. c.l. prices.
Degras, common (15-17% free fatty acid), 400-lb. dms lb. .12 - —
Neutral (over 2% free fatty acid), 400-lb. dms lb. .19 - .23
Denatured alcohol, ethyl, CD-12, CD-13, CD-14, CD-17, dms., c.l., dlvd. E. of Rockies. gal. .69½- —
dms., l.c.l., same basis gal. .74½- .80½
tanks, dlvd., same basis gal. .53½- —
Tankcar sales require written authorization by Alcohol and Tobacco Tax Division.
Denatured alcohol, ethyl, proprietary solvent, dms., c.l., dlvd. E. of Rockies gal. .72 - —
dms., l.c.l., same basis gal. .77 - .83
tanks, same basis gal. .56 - —
Tankcar sales require written authorization by Alcohol and Tobacco Tax Division.
Denatured alcohol, ethyl, SD1, dms., dlvd E. of Rockies gal. .70½- —
dms., l.c.l., same basis gal. .75½- .81½
tanks, same basis gal. .54½- —
SD2B, dms., c.l., dlvd. E. of Rockies gal. .69 - —
dms., l.c.l., same basis gal. .74 - .80
tanks, same basis gal. .53 - —
SD3A, dms., c.l., dlvd. E. of Rockies gal. .68 - —
dms., l.c.l., same basis gal. .73 - .79
tanks, same basis gal. .52 - —
SD23A, dms., c.l., dlvd. E. of Rockies gal. .70½- —
dms., l.c.l., same basis gal. .75½- .81½
tanks, same basis gal. .54½- —
SD23H, dms., c.l., dlvd. E. of Rockies gal. .71 - —
dms., l.c.l., same basis gal. .76 - .82
tanks, same basis gal. .55 - —
SD29, dms., c.l., dlvd. E. of Rockies gal. .69½- —
dms., l.c.l., same basis gal. .74½- .80½
tanks, same basis gal. .53½- —
SD30, dms., c.l., dlvd. E. of Rockies gal. .66 - —
dms., l.c.l., same basis gal. .73 - .79
tanks, same basis gal. .52 - —

Denatured alcohol, ethyl, SD-35A, dms., c.l., dlvd. E. of Rockies gal. .71 - —
dms., l.c.l., same basis gal. .76 - .82
tanks, same basis gal. .55 - —
SD-40, dms., c.l., dlvd. E. of Rockies gal. .70½- —
dms., l.c.l., same basis gal. .75½- .81½
tanks, same basis gal. .54½- —
For anhyd. alcohol on above formulas prices are 7c. per gal. higher.
West coast dlvd. prices are the same as eastern prices, except in Idaho, Montana, Oregon, and Washington where a 5c. differential on tankcars is maintained.
d-Desoxyephedrine hydrochloride, dms. lb..15.00 -17.00
dl-Desoxyephedrine hydrochloride, dms lb. 6.50 - —
Dextrin, corn, gum, paper bgs., c.l., 100 lbs. 9.38 - —
paper bgs., l.c.l. 100 lbs. 9.53 - —
canary dark, paper bgs., c.l. 100 lbs. 9.22 - —
paper bgs., l.c.l. 100 lbs. 9.37 - —
Indust. grade, 6-16 mesh, canary light, paper bgs., c.l. 100 lbs. 9.12 - —
paper bgs., l.c.l. 100 lbs. 9.27 - —
white, paper bgs., c.l. 100 lbs. 8.96 - —
paper bgs., l.c.l. 100 lbs. 9.11 - —
Corn dextrin in cotton bgs. 15c. per 100 lbs. higher.

Dextrose, anhyd., coml., bgs., c.l. 100 lbs. 8.65 - —
bgs., l.c.l. 100 lbs. 8.80 - —
Anhyd., special, aluminum foil lined fib. dms., 200-lb. dms. 100 lbs.14.70 - —
100-lb. dms. 100 lbs.15.20 - —
Hydrated, coml., bgs., c.l., ex whse. 100 lbs. 7.45 - —
bgs., c.l., ex whse. 100 lbs. 7.60 - —
USP, dms. lb. .19¾- —
Diacetyl, flavor grade, bots. lb. 4.30 - 4.55
Di-sec-amyl phenol, dms., c.l., works lb. .32 - —
dms., l.c.l., works lb. .33 - —
tanks, works lb. .29½- —
Di-tert-amyl phenol, dms., c.l., works lb. .32 - —
dms., l.c.l., works lb. .33 - —
tanks, works lb. .29½- —
Diacetone alcohol, acetone-free, dms., c.l., dlvd. lb. .15½- —
dms., l.c.l., dlvd. lb. .17 - —
tanks, dlvd. lb. .13 - —
Tech., dms., c.l., dlvd. lb. .15 - —
dms., l.c.l., dlvd. lb. .16½- —
tanks, dlvd. lb. .12½- —
Diallylamine, dms., c.l., dlvd. lb. .98½- —
dms., l.c.l., dlvd. lb. 1.00 - —
tanks, dlvd. lb. .96 - —
o-Dianisidine, dry, tech., fib. dms. lb. 2.00 - —
Dibenzyl sebacate, dms., c.l., works. lb. .93 - —
dms., l.c.l., same basis lb. .94 - —
tanks, same basis lb. .91 - —
Dibromobenzene, bgs., 500-lb. lots. lb. .53 - —

2,6-Di-tert-butyl-p-cresol, feed grade, c.l., t.l., dms., dlvd. lb. .65 - —
l.t.l., dms., same basis lb. .68 - —
Food grade, c.l., t.l., dms., dlvd. lb. .63 - —
dms., l.t.l., same basis lb. .68 - 1.10
Tech., dms., c.l., t.l., dlvd. lb. .57 - —
dms., l.c.l., same basis lb. .60 - —
tanks, same basis lb. .54 - —
Dibutyl fumarate, dms., c.l., t.l., dlvd. E lb. .31½- —
dms., l.c.l., l.t.l., dlvd. E lb. .33 - —
tanks, dlvd. E lb. .29 - —
Dibutyl maleate, dms., c.l., t.l., dlvd. E lb. .31½- —
dms., l.c.l., l.t.l., dlvd. E lb. .33 - —
tanks, dlvd. E lb. .29 - —
Dibutyl phthalate, dms., c.l., dlvd. E lb. .28½- —
dms., l.c.l., same basis lb. .30 - —
tankcars, tanktrucks, 2,000 gals., same basis lb. .26 - —
tanktrucks, 1,000-1,999 gals., same basis lb. .26½- —
Dibutyl sebacate, dms., c.l., works. lb. .67½- —
dms., l.c.l., works lb. .68½- —
tanks, works lb. .65½- —
Dibutyl tartrate, dms., works, frt. alld lb. .65½- —
Dibutylamine, dms., c.l., dlvd lb. .55½- —
dms., l.c.l., same basis lb. .57 - —
tanks, same basis lb. .53 - —
Dicapryl phthalate, dms., c.l., dlvd. lb. .27½- —
dms., l.c.l., dlvd. lb. .29 - —
tanks, dlvd. lb. .25 - —
Dicapryl sebacate, dms., c.l., works. lb. .63 - —
dms., l.c.l., works lb. .63½- .64
tanks, works lb. .61 - —



2,5-Dichloroaniline, dms., works lb. .83 - —
3,4-Dichloroaniline, tech., solid, tanks, frt. alld. lb. .73 - —
o-Dichlorobenzene, dms., c.l., frt. alld. E lb. .12¾- —
dms., l.c.l., same basis lb. .13¾- —
tanks, same basis lb. .11 - —
p-Dichlorobenzene, dms., c.l., f.o.b., works, frt. alld. E lb. .12 - —
dms., 2,000 lbs. or more same basis lb. .14½- —
1,4-Dichlorobutane, dms., c.l., or t.l., works lb. .32½- —
dms., l.c.l., or l.t.l., works lb. .34 - —
tanks, works lb. .32 - —
Dichlorodiphenyltrichloroethane (see DDT).
2,2-Dichloroethyl ether, dms., c.l., t.l., dlvd. E lb. .15½- —
dms., l.c.l., l.t.l., same basis lb. .17 - —
tanks, same basis lb. .13 - —
Dichloroisocyanuric acid, dms., c.l., t.l., frt. equald lb. .65 - —
dms., l.c.l., same basis lb. .75 - —
Dichloropentanes, dist., dms., c.l., works lb. .05 - —
dms., l.c.l., works lb. .05 - —
tanks, works lb. .03 - —
Dichlorophenoxyacetic acid (see 2,4-D).
Dicyclohexylamine, dms., c.l., works, lb. .54 - —
dms., l.c.l., works lb. .55 - —
tanks, works lb. .52 - —
Dicyclohexyl phthalate, gran., fib. dms., c.l., works, frt. alld. lb. .46½- —
fib. dms., l.c.l., same basis lb. .43 - —
Dicyclopentadiene, dms., c.l., f.o.b. works lb. .14½- —
dms., l.c.l., same basis lb. .14¾- —
tanks, same basis lb. .12 - —

Didecyl phthalate, dms., c.l., works, lb. .23¼- —
dms., l.c.l., same basis lb. .30 - —
tankcars, tanktrucks, 2,000 gals. lb. .26 - —
tanktrucks, 1,000-1,999 gals, same basis lb. .26½- —
Dieldrin, dms., c.l., dlvd. lb. 1.85 - —
dms., l.c.l. dlvd. lb. 1.90 - —
Diethanolamine, dms., c.l., dlvd. E, lb. .27 - —
dms., l.c.l., same basis lb. .26½- —
tanks, same basis lb. .24½- —
Diethanolamine lauryl sulfate, dms., c.l., frt. alld. lb. .27½- —
dms., l.t.l., frt. alld. lb. .28½- —
tanks, frt. alld. lb. .26½- —
Diethyl barbituric acid (see Barbital).
Diethyl carbonate, dms., c.l., f.o.b. works lb. .47½- —
dms., l.c.l. same basis lb. .48½- —
tanks, same basis lb. .45 - —
Diethyl ethanolammes, dms., c.l., dlvd. lb. .69½- —
dms., l.c.l., dlvd. lb. .71 - —
tanks, dlvd. lb. .67 - —
Diethyl oxalate, dms., c.l., f.o.b. works lb. .42½- —
dms., l.c.l., same basis lb. .43½- —
tanks, same basis lb. .40 - —
Diethyl phthalate, dms., c.l., dlvd. lb. .27½- —
dms., l.c.l., dlvd. lb. .29 - —
tanktrucks, 1,000-1,999 gals. same basis lb. .26½- —
tankcars, tanktrucks, 2,000-lb. lots, same basis lb. .26 - —
Diethyl sulfate, dms., c.l., works lb. .19½- —
dms., l.c.l., works lb. .20¼- —
tanks, works lb. .17½- —
Diethyl thiourea, dms., c.l., t.l., works lb. .53 - —
dms., l.c.l., same basis lb. .59 - —

Diethyl toluamide, 90-95% meta isomer, dms., c.l., t.l., works, lb. 2.30 - —
5-44 dm. lots, works lb. 2.35 - —
1-4 dm. lots, works lb. 2.40 - —
N,N-Diethyl-m-toluidine, tech., liq., tanks, frt. alld. lb. .83 - —
Diethylamine, dms., c.l., dlvd. E lb. .52 - —
dms., l.c.l., same basis lb. .53½- —
tanks, same basis lb. .49½- —
N,N-Diethylaniline, dms., c.l., frt. alld. lb. .57 - —
dms., l.c.l., same basis lb. .58 - —
tanks, same basis lb. .55 - —
Diethylbenzene, dms., t.l., frt. alld. lb. .16½- —
Di-2-ethylhexyl adipate (see Dioctyl adipate).
Di-2-ethylhexyl phthalate (see Dioctyl phthalate).
Diethylene glycol, dms., c.l., dlvd. E. lb. .17¾- —
dms., l.c.l., same basis lb. .19¼- —
tanks, same basis lb. .15¼- —
Diethylene glycol diethyl ether, dms., c.l., works lb. .51½- —
dms., l.c.l. works lb. .52¼- —
Diethylene glycol monobutyl ether, c.l., dms., works lb. .30¾- —
dms., l.c.l., works lb. .32¼- —
tanks, dlvd. E. lb. .28¼- —
Diethylene glycol monobutyl ether acetate, dms., c.l., works, lb. .30¾- —
dms., l.c.l., works lb. .31½- —
tanks, dlvd. E. lb. .28¾- —

Diethylene glycol monoethyl ether, dms., c.l., dlvd lb. .22½- —
dms., l.c.l., dlvd. lb. .24 - —
tanks, dlvd. E. lb. .20 - —
Diethylene glycol monoethyl ether acetate, dms., c.l., works, lb. .27¼- —
dms., l.c.l., works lb. .23 - —
tanks, works lb. .25¼- —
Diethylene glycol monomethyl ether, dms., c.l., dlvd lb. .21 - —
dms., l.c.l., dlvd. lb. .22½- —
tanks, dlvd. E. lb. .18½- —
Diethylenetriamine, dms., c.l., dlvd, E lb. .44 - —
dms., l.c.l., dlvd. E. lb. .45½- —
tanks, dlvd. E. lb. .41½- —
Diethylstilbesterol, USP, bots., 10-kilo lots kilo. 100.00 -147.50
bots, 1-kilo lot kilo. 110.00 -152.50
Digitalis leaves, USP, dom., dms lb. 1.25 - —
Digitoxin, USP, bots. gram. 4.20 - —
Diglycol laurate, dms. lb. .32¾- .34
Diglycol stearate, dms., ton lots lb. .26 - .28
Diglycolic acid, bgs., c.l., t.l., works, lb. .15½- —
bgs., l.c.l., works lb. .16 - —
Dihexyl sebacate, dms., c.l., works, lb. .66 - —
dms., l.c.l., works lb. .67 - —
tanks, works lb. .64 - —
Dihydrazine sulfate, dms., works lb. 1.10 - 1.25
Dihydrostreptomycin sulfate, bulk, gram. .035 - .038
1,2-Dihydroxy anthraquinone, dms., works lb. 3.45 - —
2,2-Dihydroxy-5-5-dichloro-diphenylmethane, pure, dms lb. 2.53 - —
Tech., dms., 20,000 lbs. or more lb. 1.11 - —
dms., 1,050 lbs. to 20,000 lbs. lb. 1.13 - —
dms., 150 lbs. to 1,050 lbs lb. 1.15 - —
Di-isobutyl ketone, dms., c.l., dlvd. lb. .17 - —
dms., l.c.l., dlvd. lb. .18½- —
tanks, dlvd. lb. .14½- —
Di-isobutyl phthalate, dms., c.l., dlvd. E. lb. .31½- —
dms., l.c.l., same basis lb. .32½- —
tanks, same basis lb. .29 - —
Di-isobutylene, dms., c.l., dlvd. E lb. .10 - —
dms., l.c.l., dlvd. E lb. .11½- —
tanks, dlvd. E. lb. .08 - —
Di-iso-octyl phthalate, dms., c.l., dlvd lb. .27½- —
dms., l.c.l., same basis lb. .29 - —
tanktrucks, 1,000-1,999 gals., dlvd. lb. .25½- —
tankcars, tanktrucks, 2,000 gals., dlvd lb. .25 - —
Di-iso-octyl sebacate, dms., c.l., works lb. .62 - —
dms., l.c.l., works lb. .62½- .63
tanks, works lb. .60 - —
Di-isopropanolamine, dms., c.l., dlvd. lb. .23¼- —
dms., l.c.l., same basis lb. .24¼- —
tanks, same basis lb. .20¾- —
Di-isopropylamine dms., c.l., dlvd. E. of Rockies lb. .50½- —
dms., l.c.l., same basis lb. .52 - —
tanks, same basis lb. .48 - —
Dillweed oil, dom., bots., dms lb. 3.50 - 4.25
Dimethyl anthranilate, cns. lb. 4.15 - —
Dimethyl dichlorovinyl phosphate, 55-gal. dms., dlvd lb. 3.50 - —
Dimethyl ethanolamines, anhyd., dms., c.l. dlvd lb. 1.225 - —
dms., l.c.l., dlvd. lb. 1.235 - —
tanks, dlvd. lb. 1.20 - —
70% dms., c.l., dlvd., 100% basis, contained amines lb. .68½- —
dms., l.c.l., dlvd., 100% basis, lb. .69½- —
tanks, dlvd., 100% basis lb. .66 - —
Dimethyl hydroquinone, dms. lb. 1.90 - 2.20
Dimethyl phthalate, dms., c.l., works lb. .27½- —
dms., l.c.l., works lb. .29 - —
tanktrucks, 1,000-1,999 gals., same basis lb. .25½- —
tankcars, tanktrucks, 2,000 gals., same basis lb. .25 - —
Dimethyl sebacate, dms., c.l., works, lb. 1.31 - —
dms., l.c.l., works lb. 1.30 - —
tanks, works lb. 1.23 - —
Dimethyl sulfate, ret. dms., c.l., works lb. .17½- —
ret. dms., l.c.l., works lb. .18½- —
tanks, works lb. .16½- —
Dimethyl sulfide, dms., c.l., works, lb. .16½- —
dms., l.c.l., works lb. .17 - —
tanks, works lb. .15 - —
Dimethylamine, 25% soln., dms., c.l., frt. equald, 100% basis lb. .38 - —
dms., l.c.l., frt. equald, 100% basis lb. .38½- —
tanks, frt. equald, 100% basis, lb. .28 - —
40% soln., dms., c.l., frt. equald, 100% basis lb. .35 - —
dms., l.c.l., frt. equald, 100% basis lb. .35½- —
tanks, frt. equald, 100% basis, lb. .28 - —
N,N-Dimethylaniline, dms., c.l., frt. alld lb. .28 - —
dms., l.c.l., same basis lb. .29 - —
tanks, same basis lb. .26 - —
N,N-Dimethylformamide, dms., c.l., t.l., works lb. .32½- —
dms., l.c.l., works lb. .33 - .34
tanks, works lb. .30 - —
2,4-Dinitroaniline, dms., frt. alld lb. .75 - —
Dinitroaniline orange toner, CP, bbls., dlvd. E. of Rockies, lb. 1.56 - —
Dinitroaniline orange toner prices 1c higher W. of Rockies.
m-Dinitrobenzene, 89°C., dms. lb. .26 - —
2,4-Dinitrochlorobenzene, crystallizing at 46½°C., dms., c.l., frt. alld. E lb. .17¼- —
dms., l.c.l., frt. alld. E. lb. .17¾- —
tanks, frt. alld. E. lb. .17 - —
2,4-Dinitrophenol bbls. lb. .41 - —
2,4-Dinitrotoluene, oil, dms. lb. .11 - —
Refd., 63°C., dms. lb. .23 - —
Dioctyl adipate, dms., c.l., works lb. .42½- —
dms., l.c.l., works lb. .43½- —
tanks, works lb. .40 - —
Dioctyl phthalate, dms., c.l., frt. alld lb. .27½- —
dms., l.c.l., frt. alld. lb. .29 - —
tanktrucks, 1,000-1,999 gals., same basis lb. .25½- —
tankcars, tanktrucks, 2,000 gals., same basis lb. .25 - —
Dioctyl sebacate, dms., c.l., works, lb. .61¼- —
dms., l.c.l., works lb. .62¼- —
dms., l.c.l., works lb. .62¼ —
tanks, works, dlvd. lb. .59¼- —
1,4-Dioxane, dms., c.l., works lb. .30 - —
dms., l.c.l., works lb. .30¾- —
tanks, works lb. .28 - —
Dipentaerythritol, bgs., c.l., t.l., dlvd. E lb. .40 - —
bgs., l.c.l., l.t.l., dlvd. E. lb. .41 - —

SOLVED WITH DICALITE FILLERS

NEW MATERIALS INCREASE RANGE OF APPLICATIONS

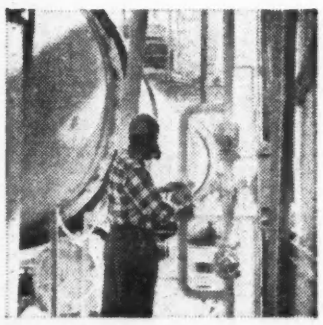
Dicalite has added new products to its family of filler materials, as well as new quality control measures. Now, diatomite, perlite and carbon-based materials are available to meet industry's widest range of filler applications.

Because of their unique particle structure and their physical and chemical properties, Dicalite filler materials are used in a tremendous variety of ways—in paint, paper, rubber, plastics, resins, cements, fertilizers, insecticides, horticultural mediums, as catalyst carriers, absorbents, etc.

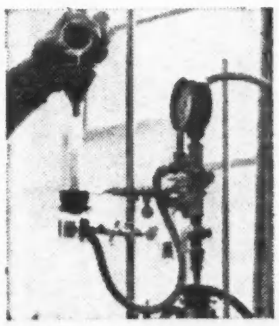
They offer tremendous surface area and porosity, great bulk in relation to weight, high absorptiveness, and structural reinforcement in many uses. All are chemically and physically stable in practically all applications. Diatomite is used in many high temperature insulations; perlite is especially effective in cryogenic applications.

Dicalite filler materials may provide an answer to your filler problem. Call the Dicalite man and see.

Careful strata selection provides the best crude for each product's final requirements.



New processing refinements, including special calcining methods, control product characteristics with an accuracy never before possible in any plant.



With more than 22,000 quality control tests every month, the Dicalite plant laboratories hold every product grade to rigid specifications.

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Dicalite®
Dicalite Department
Great Lakes Carbon Corporation
612 So. Flower Street, Los Angeles 17, Calif.

I am interested in these aspects of filler materials
☐ Bulking ☐ Structural ☐ Extender ☐ Carrier ☐ Insulation
Type of product or material _____
☐ Send information ☐ Have Dicalite man phone for appointment
NAME _____
TITLE _____
COMPANY _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____

Dipentene—Ethyl Acrylate

Dipentene, dest.-dist., dms., c.l., works gal. .58 - —
dms., l.c.l., works lb. .62 - —
dms., l.c.l., ex whse. gal. .78 - —
tankcars, works gal. .41 - —
Steam dist., dms., c.l., works, South gal. .72 - —
dms., l.c.l., dlvd. New York gal. .91 - —
tanks, works, South lb. .55 - —
Dip oil (see Tar acid oil).
Diphenolic acid, 1,000-lb. or more, bgs., works lb. .75 - —
Diphenolic polyether acids, 1,000-lb. or more, bgs., works lb. 1.00 - —
Diphenyl, bgs., c.l., t.l., works lb. .16¾- —
bgs., l.c.l., works lb. .18½- —
tanks, works lb. .15¾- —
Diphenyl oxide, perfume grade, cns. lb. .55 - .70
Diphenyl phthalate, dms., c.l., works. lb. .51¾- —
dms., l.c.l., works lb. .53¾- —
Diphenylamine, refd., flake, bgs., c.l., works, frt. equald lb. .31 - —
bgs., l.c.l., same basis lb. .33 - —
Refd., fused, tanks, same basis lb.
Refd., diphenylamine in dms., ½c. per lb. higher. .28 - —
Diphenylguanadine, bgs., dms., ton lots, frt. alld lb. .49 - —
bgs., smaller lots, frt. alld lb. .50 - —
Diphenylhydantoin-sodium, USP, dms. lb. 5.00 - 5.60

Dipropylene glycol, dms., c.l., frt. alld lb. .17 - —
dms., l.c.l., frt. alld. lb. .18½- —
tanks, frt. alld. lb. .14¼- —
Dipropylene glycol methyl ether, dms., c.l., dlvd. E lb. .20 - —
dms., l.c.l., same basis lb. .21½- —
tanks, same basis lb. .18½- —
Dithiodibenzoic acid, dms., 1,000-lb. lots, works lb. 1.45 - —
Di-o-tolylguanidine, dms., ton lots, frt. alld lb. .69 - —
dms., smaller lots, frt. alld lb. .70 - —
Di-o-tolylthiourea, tech., solid, dms., c.l., t.l., frt. alld lb. .55 - —
Divinylbenzene, 20-25%, dms., c.l., works, frt. equald lb. .20 - —
dms., l.c.l., same basis lb. .21 - —
tanks, same basis lb. .19 - —
50-60%, dms., c.l., works, 100% b.sis lb. 1.00 - —
dms., l.c.l., works, 100% basis, lb. 1.05 - —
tanks, same basis lb. .90 - —
Dodecenyl succinic anhydride, dms., c.l., t.l., dlvd. E lb. .75 - —
dms. l.c.l., l.t.l., same basis lb. .76 - —
Dodecylbenzene, dms., c.l., f.o.b., works, frt equald lb. .134 - —
dms., l.c.l., same basis lb. .144 - —
tanks, same basis lb. .11 - —
Dodecylphenol, c.l., frt. alld. lb. .22 - —
dms., l.c.l., same basis lb. .23 - —
tanks, same basis lb. .19½- —
Dodecylphenol prices on shipments to Western States are 2c. per pound higher.

Dyes, coaltar, certified colors for food, drugs and cosmetics, 500-lb. and 1-lb. lots, dlvd.:

Blue, FD&C, No. 1 lb.15.65 -17.60
No. 2 lb.15.65 -17.60
Green, FD&C, No. 1 lb.15.65 -17.60
No. 2 lb.19.60 -22.85
No. 3 lb.31.30 -35.90
Red, FD&C, No. 1 lb. 5.90 - 7.85
No. 2 lb. 3.30 - 4.10
No. 3 lb.19.60 -22.85
No. 4 lb. 5.55 - 7.50
Violet, FD&C, No. 1 lb.15.65 -17.60
Yellow, FD&C, No. 1 lb. 9.15 -11.05
No. 5 lb. 3.30 - 4.10
No. 6 lb. 3.30 - 4.10

Dyes, coaltar, certified colors for drugs and cosmetics, 200-lb. and 1-lb. lots, dlvd.:—
Black, D&C, No. 1 lb.10.50 -10.95
Brown, D&C, No. 1 lb.15.65 -16.10
Green, D&C, No. 5 lb.15.65 -16.10
No. 6 lb.15.65 -16.10
No. 7 lb.14.35 -14.80
Orange, D&C, No. 3 lb.10.50 -10.95
No. 4 lb.19.60 -20.05
No. 5 lb. 3.80 - 4.25
Red, D&C, No. 17 lb.10.50 -10.95
No. 18 lb.23.60 -24.00
No. 19 lb.15.00 -15.45
No. 21 lb. 3.90 - 4.35
No. 22 lb.10.50 -10.95
No. 28 lb.24.15 -24.65
No. 33 lb.17.00 -17.45
Violet, D&C, No. 2 lb.15.65 -16.10
Yellow, D&C, No. 7 lb.10.50 -10.95
No. 8 lb.10.50 -10.95
No. 10 lb.13.05 -13.50
No. 11 lb.13.05 -13.50

Dyes, coaltar, certified colors for drugs and cosmetics, external use, 500-lb. and 1-lb. lots, dlvd.:—

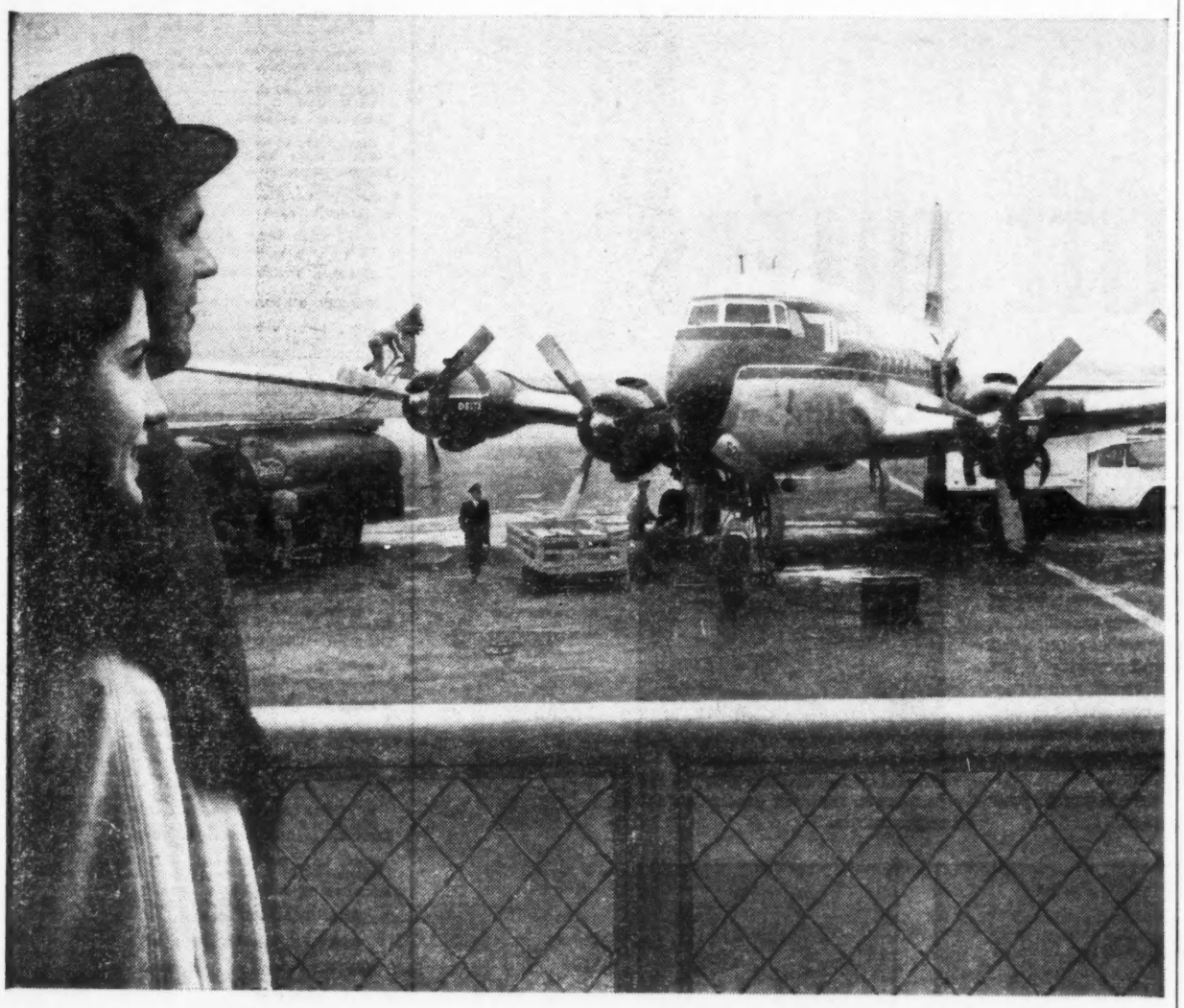
Blue, Ext., D&C, No. 1 lb.15.65 -16.10
Green, Ext., D&C, No. 1 lb.15.65 -16.10
Red, Ext., D&C, No. 1 lb.13.05 -13.50
Yellow, Ext, D&C, No. 1 lb.10.50 -10.95

Dyes, coaltar for general use in cloth dyeing (numbers are those of the Color Index scale or prototype), contract dlvd. No.
11110 Brilliant scarlet BN lb. 1.79 - —
13380 Fast blue SR lb. 1.43 - —
13625 Yellow 2G lb. 1.26 - —
14030 Orange R, extra, conc. lb. 1.64 - —
14645 Chrome black T lb. .77 - —
14720 Rubine XX, conc. lb. 1.59 - —
15510 Orange Y, extra conc. lb. .83 - —
15575 Orange RR lb. .99 - —
15620 Fast Red A, conc lb. 1.61 - —
15705 Chrome blue black R, conc. lb. 1.12 - —
16150 Scarlet 2RL lb. 1.22 - —
16255 Brilliant scarlet 3RN, conc. lb. 1.26 - —
16230 Fast light, orange 2G lb. 1.39 - —
17590 Brown PG lb. 3.00 - —
18050 Phloxine 2G lb. 1.05 - —
18055 Fuchsine 6B lb. 1.35 - —
18965 Fast yellow 2G lb. 2.32 - —
19140 Yellow XX lb. 2.48 - —
19555 Yellow NN, conc. lb. 3.67 - —
20170 Brown Y lb. 1.33 - —
20470 Blue black, extra, conc lb. 1.44 - —
21010 Brown, RX, conc. lb. 1.35 - —
22240 Scarlet B lb. 2.81 - —
22310 Red FC lb. 1.57 - —
22311 Brown MCW lb. 1.47 - —
22590 Diazo black BHD lb. .93 - —
22610 Blue 2B, extra conc. lb. 1.53 - —
23500 Red, 4BX, conc. lb. 1.80 - —
24410 Sky blue FF, extra, conc. lb. 1.95 - —
24895 Brilliant yellow, conc. lb. 3.27 - —
26360 Navy blue 3R, conc. lb. 1.84 - —
26695 Black F, conc. lb. 2.50 - —
26900 Milling Red 3R, conc lb. 1.91 - —
27075 Neutral black 2B, conc lb. 2.75 - —
27720 Gray L lb. 2.18 - —
29185 Fast scarlet 4BNC lb. 2.23 - —
30015 Diazo black VJ conc. lb. 2.48 - —
30045 Yellow brown K, extra lb. 1.25 - —
30225 Black EB, 200% lb. 1.53 - —
30295 Green BY, conc. lb. 1.07 - —
35660 Brown B lb. 2.89 - —
37565 Naphthol SWF lb. 1.85 - —
40000 Yellow 2G lb. 1.44 - —
41000 Yellow OX lb. 2.45 - —
42000 Green V, crystals lb. 2.73 - —
42040 Brilliant green G crystals lb. 3.62 - —
42090 Blue EG lb. 1.85 - —
42100 Milling green 6B, conc. lb. 4.78 - —
42540 Violet 4BXN lb. 2.43 - —
42650 Brilliant blue, BBG lb. 2.44 - —
44045 Blue B, extra conc. lb. 3.61 - —
45170 Red BX lb. 4.76 - —
50415 Nigrosine SSJ lb. 1.03 - —
52015 Blue GXX lb. 2.33 - —
53185 Black, GXCF, conc. lb. .38 - —
58005 Alizarin red SC lb. 3.64 - —
59700 Golden orange GFD, single paste lb. 2.70 - —
59710 Flaming orange 6RD double powder lb. 4.90 - —
59800 Dark blue BO, single paste, lb. 2.28 - —
59825 Jade green NC supra, double paste lb. 1.50 - —
61570 Alizarin green CG, extra lb. 3.81 - —
63010 Alizarin blue SAPG lb. 3.90 - —
63615 Alizarin blue black B lb. 3.26 - —
69825 Blue BLFD double paste lb. 2.12 - —
70800 Brown BR single paste lb. 2.03 - —

Dyes, coaltar, oil-soluble, 100-lb. drums, dlvd.
No.
12140 Oil scarlet BL lb. 1.87 - —
12055 Oil orange 7078 V lb. 1.38 - —
26120 Oil red N 1700 lb. 1.94 - —
42535B Methyl violet base lb. 1.88 - —
44045B Victoria blue base lb. 4.06 - —
50415B Oil black 8603 lb. .80 - —
61565 Alizarin cyanine green base. lb. 6.13 - —
Spirit black RB lb. 3.89 - —
Spirit brown GN lb. 5.30 - —
Spirit orange R conc. lb. 5.87 - —
Spirit red B conc lb. 6.41 - —
Pr. 517 Spirit yellow 2R conc lb. 4.62 - —
Pr. 554 Spirit blue THN lb. 5.06 - —

E

Echinacea root, bls. lb. 1.25 - —
Elm bark, grinding, bls. lb. .30 - .32
Powd., bbls., bxs. lb. .50 - .55
Select, bundles lb. .75 - —
Emetine hydrochloride, USP, bots. oz.48.40 - —
Endrin, tech., dms., 100-lbs. or more, 100% basis, dlvd. lb. 2.70 - —
Eosin red toner, bbls., works lb. 1.95 - —
Ephedrine, syn., USP, anhyd., bots. 100-oz. lots oz. .98 - 1.00
hydrous, bots., 100-oz. lots, oz. .92 - —
Ephedrine hydrochloride, NF, dms., 100-oz. f.o.b. works oz. .72 - —
Ephedrine sulfate, USP, cryst., dms., 100-oz. f.o.b. works oz. .73 - —
USP, powd., dms., 100-oz., same basis oz. .73 - —
Epichlorohydrin, dms., c.l., dlvd. lb. .29½- —
dms., l.c.l., dlvd. lb. .31 - —
tanks, dlvd. lb. .27 - —
Epsom salt (see Magnesium sulfate).
l-Epinephrine base, syn., USP, bots., 100 gram. lots gram. .58 - —
Erigeron oil, cns. lb.11.00 - —
Ergot, NF, dms., tin-lined lb. 1.00 - 1.25
Eserine salicylate, bots. oz.44.00 - —
Eserine sulfate, bots. oz.86.00 - —
Ester gum, gum-rosin type, dms., c.l., dlvd., Ill., Md., Ky., E. States, Minneapolis, N. C., Ohio, St. Louis, St. Paul, Va., W. Va. lb. .18½- —
Wood-rosin type, dms., c.l., same basis lb. .18½- —
Ether (see specific product).
Ethyl acetate, nat., ferment. 85-88%, dms., c.l., dlvd. lb. .15 - —
dms., l.c.l., dlvd. lb. .16½- —
tanks, dlvd. lb. .12½- —
95-98%, dms., c.l., dlvd. lb. .15¼- —
dms., l.c.l., dlvd. lb. .16¾- —
tanks, dlvd. lb. .12¾- —
99%, dms., c.l., dlvd. lb. .15½- —
dms., l.c.l., dlvd. lb. .17 - —
tanks, dlvd. lb. .13 - —
Ethyl acetate, syn., 85-88%, dms., c.l., dlvd. lb. .15 - —
dms., l.c.l., dlvd. lb. .16½- —
tanks, dlvd. lb. .12½- —
95-98%, dms., c.l., dlvd. lb. .15¼- —
dms., l.c.l., dlvd lb. .16¾- —
tanks, dlvd. lb. .12¾- —
99%, dms., c.l., dlvd. lb. .15½- —
dms., l.c.l., dlvd. lb. .17 - —
tanks, dlvd. lb. .13 - —
Ethyl acetoacetate, dms., c.l., dlvd. lb. 58½- —
dms., l.c.l., dlvd. lb. .60 - —
tanks, dlvd. lb. .56 - —
Ethyl acrylate, dms., c.l., t.l., dlvd. lb. .36 - —
dms., l.t.l., dlvd. lb. .37 - —
tanks, dlvd. lb. .34 - —



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Not a drop of ethylene glycol or diethylene glycol in sight. But these versatile glycols are anonymously working all around to make this a safe and pleasant flight. De-icing fluids for aircraft and runways, anti-freeze in supply trucks, hydraulic fluids in aircraft and trucks . . . plastic panelling in aircraft, plastic food trays and insulated food warmers are all practical applications for glycols.

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Ethylene and Propylene Oxides, Glycols, Dichlorides, Carbonates
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Piperazine • Piperazine Salts • Nonyl Phenol • Caustic Soda
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JEFFERSON CHEMICALS

614

W. R. GRACE & Co. reports on 1959

Chemicals lead the way to over-all improvement

In 1959 earnings of W. R. Grace & Co. were 48% higher than in the previous year, amounting to $14,827,290. Earnings per share were $3.04 compared with $2.07. The major factor in the improvement was a substantial rise in the earnings of the chemical divisions, which contributed 68% of total pretax operating profits.

In addition, Latin American earnings were higher as economic conditions improved and exchange rates were more stable. Conditions continued to be difficult in the shipping industry and Grace Line profits were lower.

Important developments of 1959 and early 1960 included the purchase of a majority interest in Cosden Petroleum Corporation, an independent refiner and producer with a strong position in petrochemicals; entry into the manufacture of synthetic jet lubricant esters, as well as plasticizers, by the new Hatco Chemical Division; and the completion of three successful wells in the Libyan oil exploration venture in which Grace is associated with Texas Gulf Producing Company and Standard Oil Company (New Jersey).

For a copy of the Company's 1959 Annual Report, just published, write to the Public Relations Dept., 3 Hanover Square, New York 4, N. Y.

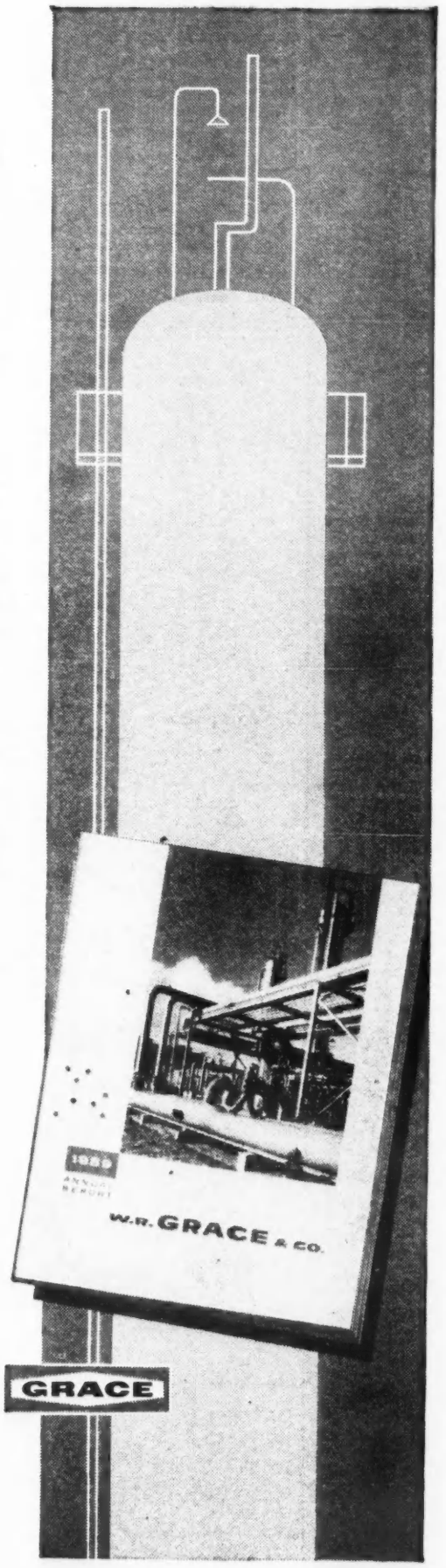
Highlights of the Year's Operations

Year Ended December 31

	1959	1958
Sales and Operating Revenues	$469,695,671	$434,234,391
Net Income After Taxes	$ 14,827,290	$ 10,039,855
Per Share of Common Stock	$ 3.04	$ 2.07
Cash flow per share	$ 8.34	$ 7.51
Preferred Dividends Paid	$ 928,664	$ 928,664
Common Dividends Paid	$ 7,343,155	$ 9,692,815
Per Share—at rate of	$ 1.60	$ 2.20
Stock Dividend Paid on Common	2%	—
Net Working Capital	$138,135,774	$130,295,418
Current Ratio	2.5 to 1	2.7 to 1
Net Fixed Assets	$232,735,277	$221,931,925
Stockholders' Equity per Common Share	$ 47.77	$ 47.44
Number of Common Stockholders	30,052	28,052

W.R. GRACE & CO.

Executive Offices: 7 Hanover Square, New York 5, N. Y.

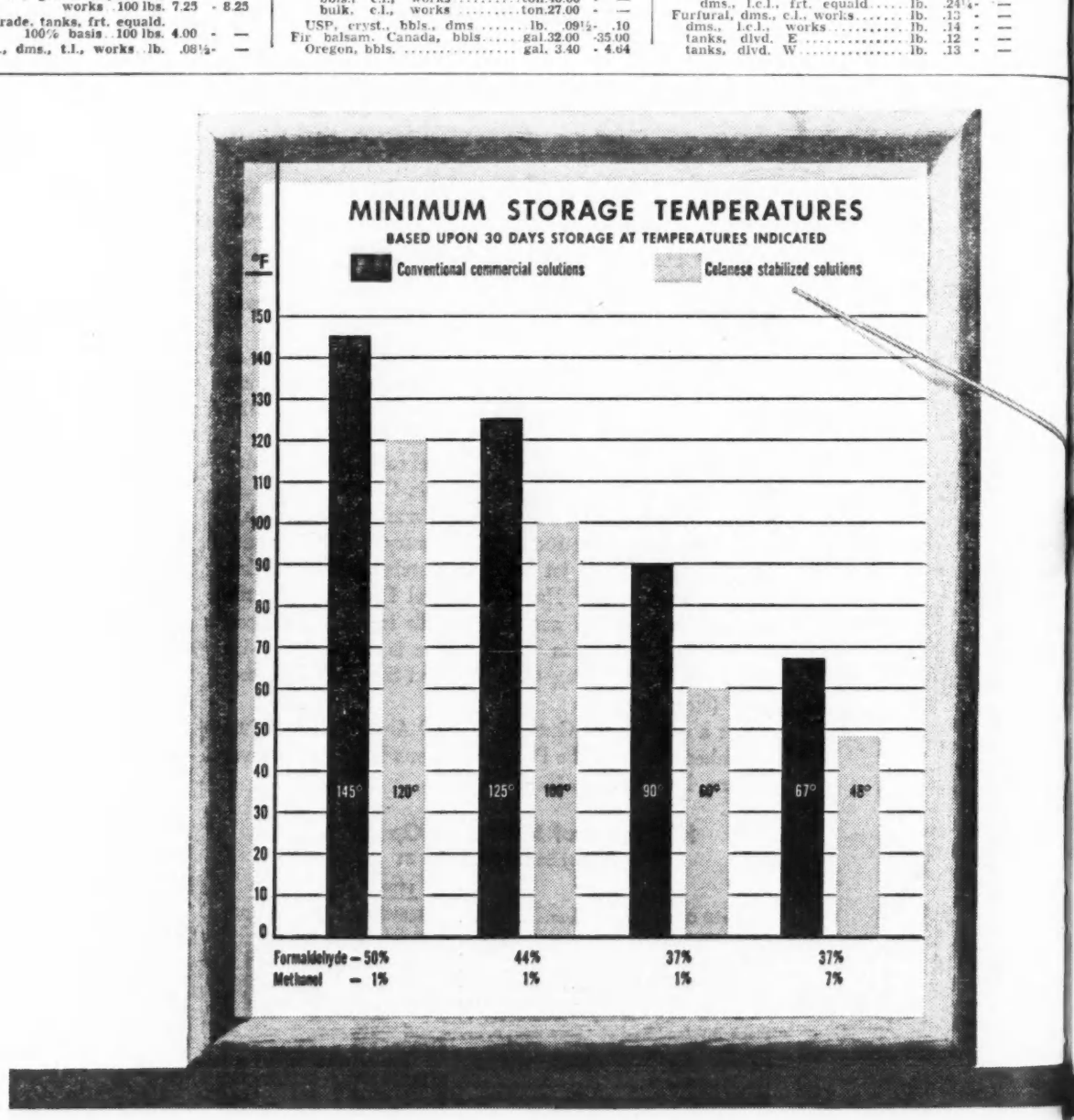


Ethyl alcohol, 190 pf., USP, tax paid dms, c.l., dlvd. E. of Rockies..gal.20.63 - —
dms., l.c.l., same basis..gal.20.68 -20.74
Ethyl alcohol, 190 pf., USP, tax-free, dms., c.l., dlvd. E. of Rockies..gal. .68 - —
dms., l.c.l., same basis..gal. .73 - .79
tanks, same basis.....gal. .52 - —
Ethyl alcohol, absolute, 200 pf., tax paid, dms., dlvd. E. of Rockies..gal.21.75 - —
dms., l.c.l., same basis..gal.21.80 -21.86
tanks, same basis.....gal.21.59 - —
Ethyl alcohol, denatured (see Denatured alcohol, ethyl).
Ethyl aminobenzoate, USP (see Benzocaine).
Ethyl amyl ketone, dms., c.l., dlvd. lb. .20 - —
dms., l.c.l. same basis.....lb. .21½- —
tanks, same basis.....lb. .17½- —
Ethyl benzoate, bots.....lb. .75 - 1.00
Ethyl bromide, tech., 98%, dms., c.l., frt. alld. E lb. .43 - —
dms., l.c.l., frt. alld. E..lb. .45 - —
tanks, frt. alld. E.....lb. .41 - —
Ethyl butyl ketone, dms., c.l., t.l., works lb. .36 - —
dms., l.c.l., l.t.l. works.....lb. .36¾- —
tanks, works.....lb. .34 - —
Ethyl butyrate, dms., works....lb. .85 - 1.00
Ethyl carbamate (see Urethane).
Ethyl cellulose, vis. 7 cps., bgs., 5.000-lb. lots or more, frt. alld. E lb. .73 - —
bgs., smaller lots, frt. alld. E lb. .75 - —
Vis. 10, 20, 50, 100, 150 cps., bgs., 5.000-lb. lots or more, frt. alld. E lb. .68 - —
bgs., smaller lots, frt. alld. E. lb. .70 - —
Ethyl chloride, tech., cyls., works. lb. .20 - .22
dms., works.....lb. .18 - .20
tanks, works.....lb. .10 - —
Ethyl cinnamate, cns.....lb. 3.35 - 3.50
Ethyl ethanolamies, mixed, dms., c.l., dlvd. E lb. .43½- —
dms., l.c.l., dlvd. E.....lb. .44½- —
tanks, dlvd. E.....lb. .41½- —
Ethyl ether, absolute, ACS, dms lb. .27 - —
Anesthesia, USP, dealers, 1-lb. cns lb. 1.01 - —
½-lb. cns.....lb. 1.09 - —
¼-lb. cns.....lb. 1.21 - —
Indust., dms., c.l., dlvd.....lb. .13½- —
dms., l.c.l., dlvd. E.....lb. .15 - —
tanks, dlvd E.....lb. .11 - —
2-Ethyl hexoic acid, dms., c.l., t.l., dlvd. E lb. .37 - —
dms., l.c.l., l.t.l., dlvd. E.....lb. .38½- —
tanks, dlvd. E.....lb. .34½- —
2-Ethyl hexoic acid, 1c. higher W. of Rockies.
2-Ethyl hexyl acrylate, dms., c.l., t.l., straight or mixed frt. alld. E lb. .42½- —
dms., l.t.l., same basis.....lb. .43½- —
tanks, same basis.....lb. .40 - —
Prices of 2-ethylhexyl acrylate are 1½c. per lb. higher in Ariz., Calif., Idaho, Nev., Ore., Utah and Wash.
2-Ethylhexyl alcohol, dms., c.l., dlvd. lb. .23¾- —
dms., l.c.l. dlvd.....lb. .25¼- —
tanks, dlvd.....lb. .21¼- —
Ethyl iodide, cbys., works.....lb. 3.30 - —
Ethyl methacrylate, dms., c.l., frt. equald lb. .52 - —
dms., l.t.l., frt. equald.....lb. .52½- —
tanks, frt. equald.....lb. .50 - —
Ethyl morphine hydrochloride, USP, bots oz.11.85 - —
Ethyl oenanthate, dms.....lb. 1.05 - 1.30
Ethyl oxalate (see Diethyl oxalate).
Ethyl silicate, dist. (see Tetraethyl orthosilicate).
Ethyl silicate, 40% available SiO_2, dms., c.l., dlvd lb. .44½- —
dms., l.c.l., dlvd.....lb. .46 - —
tanks, dlvd.....lb. .42 - —
N-Ethyl-a-naphthylamine, dms., works. lb. 1.02 - —
N-Ethyl-m-toluidine, tech., liq., tanks, frt. alld lb. .83 - —
N-Ethyl-o-toluidide, bbls.....lb. .88 - —
Ethylamine (see Mono-, Di-, or Tri-)
N-Ethylaniline, dms., c.l., frt. alld. lb. .57 - —
dms., l.c.l., frt. alld.....lb. .58 - —
tanks, frt. alld.....lb. .55 - —
Ethylbenzene, 60%, dms., c.l., t.l., frt. equald lb. .15 - —
dms., l.c.l., same basis.....lb. .17 - —
tanks, same basis.....lb. .12½- —
2-Ethylhexyl alcohol, dms., c.l., works lb. .30 - —
dms., l.c.l., works.....lb. .30¾- —
tanks, works.....lb. .28 - —
Ethylene, contract, ref'y. gate..lb. .0475- .0525
Ethylene dibromide, dms., c.l., frt. equald lb. .30½- —
dms., l.c.l., frt. equald.....lb. .31½- —
tanks, frt. equald.....lb. .28½- —
Ethylene dichloride, dms., c.l., dlvd. lb. .11½- —
dms., l.c.l., same basis.....lb. .13 - —
tanks, same basis.....lb. .09 - —
Ethylene dichloride prices W. of Rockies, 1c. per lb. higher.
Ethylene glycol, indust., dms., c.l., dlvd. E lb. .16 - —
dms., l.c.l., same basis.....lb. .17½- —
tanks, same basis.....lb. .13½- —
Ethylene glycol monobutyl ether, dms., c.l., dlvd. E lb. .22 - —
dms., l.c.l., dlvd. E.....lb. .23½- —
tanks, dlvd. E.....lb. .19½- —
Ethylene glycol monoethyl ether, dms., c.l., dlvd. E lb. .21 - —
dms., l.c.l., dlvd. E.....lb. .22½- —
tanks, dlvd. E.....lb. .18½- —
Ethylene glycol monoethyl ether acetate, dms., c.l., dlvd. E lb. .19½- —
dms., l.c.l., dlvd. E.....lb. .20½- —
tanks, dlvd. E.....lb. .17 - —
Ethylene glycol monomethyl ether, dms., c.l., dlvd. E lb. .21 - —
dms., l.c.l., dlvd. E.....lb. .22½- —
tanks, dlvd. E.....lb. .18½- —
Ethylene glycol monomethyl ether acetate, dms., c.l., dlvd. E lb. .29 - —
dms., l.c.l., dlvd. E.....lb. .29¾- —
tanks, dlvd. E.....lb. .27 - —
Ethylene glycol monostearate, triple pressed, dms lb. .33 - .35
Ethylene oxide, dms., c.l., dlvd. E. lb. .21½- —
dms., l.c.l., dlvd. E.....lb. .24½- —
tanks, dlvd. E.....lb. .15½- —
Ethylene trichloride (see Trichloroethylene).
Ethylenediamine, 85-88%, dms., c.l., dlvd. E., 100% basis lb. .42 - —
dms., l.c.l., dlvd. E., 100% basis. lb. .43 - —
tanks, dlvd. E., 100% basis lb. .40 - —
Ethylvanillin, 100-lb. f.b. dms., 500-lb. lots and over lb. 6.75 - —
200-lb. lots and over.....lb. 7.00 - —
100-lb. lots and smaller.....lb. 7.30 - 7.40

Eucalyptol, USP, cns., dms.....lb. .85 - 1.40
Eucalyptus oil, NF, rectified, 70-75%, dms..lb. .44 - .55
NF, rectified, 80-85%, dms.....lb. .53 - .62
Eugenol, tech., dms.....lb. 1.45 - —
USP, dms.....lb. 2.10 - 2.80
Euphorbia herb, bls.....lb. .12 - .15

F

F salt, paste, tech., dms., works..lb. 2.30 - —
Feldspar, 140-200 mesh, bulk, c.l., works..ton.19.50 - —
Feldspar in bags $3 per ton higher.
Fennel oil, sweet, USP, cns....lb. 2.25 - 2.70
Fennel seed, Argentine, bgs.....lb. .14 - —
French, light, bgs.....lb. .20 - —
Indian, light, bgs.....lb. .17 - —
Rumanian, bgs.....lb. .14 - —
Yugoslav, light, bgs.....lb. .16½- —
Fenugreek seed, Moroccan, bgs lb. .07½- —
Ferric chloride, anhyd., tech., dms., c.l., works..100 lbs. 7.50 - —
dms., l.c.l., works.....100 lbs. 8.50 - —
Indust., cryst., bbls., c.l., works. 100 lbs. 5.25 - 6.75
bbls., l.c.l., works...100 lbs. 5.75 - 7.25
42° Be., photo grade, cbys., c.l., works..100 lbs. 7.25 - 8.25
sewage grade, tanks, frt. equald. 100% basis..100 lbs. 4.00 - —
USP, cryst., dms., t.l., works..lb. .08½- —
Ferric citrate, gran., dms.....lb. .86 - —
Ferric hypophosphite, NF, dms..lb. 3.45 - —
Ferric naphthenate, liq., 6% Fe, dms., frt. alld lb. .28¼- —
Ferric oxalate, tech., gran., 50-lb. dm., f.o.b. works E lb. .89 - —
Ferric oxides (see iron oxides).
Ferric phosphate, NF, soluble, gran. pearls, cs. lb. .72 - .75
Ferric pyrophosphate, NF VII, soluble, gran., pearls, dms.lb. .70 - —
Ferric resinate, 6¾% Fe., dms., ton lots, frt. alld lb. .40¼- —
Ferric stearate, dms., c.l., frt. alld. lb. .39 - —
dms., l.c.l., frt. alld.....lb. .40 - .44
Ferric sulfate, partly hydrated, bgs., c.l., works..ton.35.25 - —
bgs., l.c.l., works.....ton.36.25 -42.25
bulk, c.l., works.....ton.33.25 - —
Ferric-ammonium citrate, brown, pearls, NF, gran., dms lb. .65 - .68
Green pearls, USP XII, gran., dms lb. .66 - .69
Ferric-ammonium oxalate, fine gran., dms lb. .27½- .29½
Ferric-potassium oxalate, fine gran., dms lb. .32½- .34½
Ferric-sodium oxalate, fine gran., dms lb. .27½- .29½
Ferrous gluconate, USP, 200-lb. dm., frt. equald lb. .96 - —
Ferrous sulfate, gran., bgs., c.l., works ton.34.50 - —
bgs., l.c.l., dlvd. Metropolitan area..100 lbs. 3.35 - 4.25
bbls., c.l., works.....ton.40.00 - —
bulk, c.l., works.....ton.27.00 - —
USP, cryst., bbls., dms.....lb. .09½- .10
Fir balsam, Canada, bbls.....gal.32.00 -35.00
Oregon, bbls.....gal. 3.40 - 4.64
Fir oil, Canada, cns.....lb. 1.75 - 2.50
Fish oil, refd., alkali, dms.....lb. .1300- .1350
Kettle-bodied, dms.....lb. .1530- .1580
Light-pressed, dms.....lb. .1150- .1200
tanks.....lb. .10 - —
Fishliver oil, nat., high potency, 100,000 to 1,500,000 A units per gram, dms 1,000,000 units. .12 - —
Fishmeal, dom., menhaden, 60% protein, grd., bgs., Atlantic and Gulf coasts ton.105.00 - —
Fishscrap, dom., menhaden, dried, 60% protein, grd., bgs., Atlantic and Gulf coasts. ton.101.00 - —
Fleaseed (see Psyllium seed).
Folic acid, USP, bots., fib. dms., kilo lots or more gram. .30 - .44
10% feed grade, fib. dms., 3 kilos or more kilo.30.00 -44.00
37% (inhibited 12 to 15% methanol), USP, dms., c.l., dlvd. lb. .0895- —
tanks, dlvd.....lb. .0405- —
Formaldehyde, 37% (inhibited, 12 to 15% methanol), USP, dms., c.l., dlvd lb. .0695- —
tanks, dlvd.....lb. .0430- —
Formaldehyde, methanol-free (uninhibited), tanks, dlvd lb. .0375- —
Formic acid, 85%, cbys., c.l., works. lb. .1570- —
cbys., l.c.l., works.....lb. .1620- .1720
90%, cbys., c.l., works.....lb. .1625- —
cbys., l.c.l., works.....lb. .1675- .1775
Fringetree bark, bls.....lb. .65 - .70
Fumaric acid, tech., 250-lb. dms., c.l., frt. equald lb. .22¾- —
dms., l.c.l., frt. equald.....lb. .24¼- —
Furfural, dms., c.l., works.....lb. .13 - —
dms., l.c.l., works.....lb. .14 - —
tanks, dlvd. E.....lb. .12 - —
tanks, dlvd. W.....lb. .13 - —



STABILIZED F

As you see...!

The red bars?

These are minimum storage temperatures for Celanese stabilized formaldehyde.

And the black?

Same thing for conventional HCHO solutions.

What does this show?

Stabilized Celanese formaldehyde solutions can be stored—and shipped—at much lower temperatures!

What does that mean for me?

Significant savings in steam and heating costs for storing formaldehyde!

Any detrimental effects on end products?

On the contrary! Products are often improved. Better, clearer resins are frequently made. This stabilization maintains formaldehyde at lower acidity levels... prevents loss of concentration.

Any other gains?

Cuts maintenance costs, too! It reduces clouding, precipitation of paraform, and gumming of formaldehyde tank bottoms. The stabilized chemical goes back into solution time after time if storage temperatures drop below recommended minimums.

How about price?

It costs no more! And it's been thoroughly field tested.

Sounds wonderful! When do you deliver?

Right now! And all you need!

Furfuryl alcohol, cns., works ... lb. .28 - —
dms., c.l., t.l., Newark, N. J ... lb. .20½- —
dms., l.c.l., l.t.l., Newark, N. J ... lb. .21½- —
dms., c.l., t.l., Memphis, Tenn lb. .19 - —
dms., l.c.l., l.t.l., Memphis, Tenn. lb. .20 - —
tanks, Memphis, Tenn. ... lb. .175 - —
Fusel oil, refd., dms., c.l., dlvd lb. .18 - —
dms., l.c.l., dlvd. ... lb. .19½- —
tanks, dlvd. ... lb. .15½- —

G

G salt, bbls., frt. alld., 100% basis lb. .73 - —
Gallic acid, NF, VII, bbls., 1,000-lb. lots lb. 2.00 - —
bbls., smaller lots ... lb. 2.02 - 2.22
Tech., bbls., 1,000-lb. lots ... lb. 1.73 - —
bbls., smaller lots ... lb. 1.83 - 2.03
Gamma acid, dry grd., bbls., frt. alld lb. 1.75 - —
Gammapicoline (see g-picoline).
Garlic oil, dom., bots. ... oz. 4.75 - 6.05
Imp., bots. ... oz. 4.50 - 5.00
Gaultheria oil (see Wintergreen oil).
Gelatin, edible, 75 AOAC test, bbls., c.l., dlvd lb. .55 - —
150 AOAC test, bbls., c.l., dlvd. lb. .61 - —
200 AOAC test, bbls., c.l., dlvd. lb. .70 - —
225 AOAC test, bbls., c.l., dlvd. lb. .74 - —
275 AOAC test, bbls., c.l., dlvd. lb. .82 - —
Gelsemium root, bls. ... lb. .30 - .35
Gentian root, bls. ... lb. .24 - —
Grd., bbls., bxs. ... lb. .30 - —
Powd., bbls., bxs. ... lb. .30 - —
Geraniol, extra, cns., dms. ... lb. 1.75 - 2.40
Soap grade, dms. ... lb. .90 - 1.75
Standard, cns., dms., ... lb. .90 - 1.75
Geranium oil, Algerian, cns ... lb. 19.00 - —
Bourbon, cns. ... lb. 23.00 - 25.00
Geranium oil, Turkish (see Palmarosa oil).
Geranyl acetate, cns. ... lb. 1.90 - 2.70
Ginger oil, dist., bots. ... lb. 11.50 - 14.00
Ginger oleoresin, NF, from African root, bots lb. 4.25 - 5.00
NF, from Jamaican root, bots. lb. 7.75 - —
Ginger root, Cochin, bgs. ... lb. .25 - —
Jamaican, No. 3, bgs. ... lb. .30 - —
Nigerian, split, bgs. ... lb. .15 - —
Sierra Leone, bgs. ... lb. .21 - —
Glauber's salt (see Sodium sulfate).
Gluconic acid, tech., 50%, dms., c.l., t.l., frt. alld lb. .18 - —
dms., l.c.l., frt. alld. ... lb. .20½- —
tanks, frt. alld. ... lb. .13½- —
Glue, bone, extracted, dry bone, 88 jellygrams, bgs., c.l., dlvd. lb. .16 - —
131 jellygrams, bgs., c.l., same basis lb. .16½- —
164 jellygrams, bgs., c.l., same basis lb. .18½- —
191 jellygrams, bgs., c.l., same basis lb. .19½- —
222 jellygrams, bgs., c.l., same basis lb. .21 - —
Glue, bone, green, 40 jellygrams, bgs., c.l., same basis lb. .16 - —
85 jellygrams, bgs., c.l., same basis lb. .16 - —
115 jellygrams, bgs., c.l., same basis lb. .16½- —
135 jellygrams, bgs., c.l., same basis lb. .17½- —
164 jellygrams, bgs., c.l., same basis lb. .18½- —
189 jellygrams, bgs., c.l., same basis lb. .19½- —
200 jellygrams, bgs., c.l., same basis lb. .20½- —
Bone glue, l.c.l., prices 2c. higher.
Glue, hide, 70-94 jellygrams, bgs., c.l., dlvd. lb. .18 - —
95-149, bgs., c.l., dlvd. ... lb. .19 - —
122-149, bgs., c.l., dlvd. ... lb. .20½- —
150-177, bgs., c.l., dlvd. ... lb. .22½- —
178-206, bgs., c.l., dlvd. ... lb. .25 - —
207-236, bgs., c.l., dlvd. ... lb. .28 - —
237-266, bgs., c.l., dlvd. ... lb. .30½- —
267-298, bgs., c.l., dlvd. ... lb. .32½- —
299-330, bgs., c.l., dlvd. ... lb. .34½- —
331-362, bgs., c.l., dlvd. ... lb. .36½- —
363-394, bgs., c.l., dlvd. ... lb. .38 - —
395-427, bgs., c.l., dlvd. ... lb. .40 - —
428-460, bgs., c.l., dlvd. ... lb. .42 - —
461-494, bgs., c.l., dlvd. ... lb. .44 - —
495-529, bgs., c.l., dlvd. ... lb. .46 - —
Ilide glue, l.c.l., prices 2c. higher.
l-Glutamic acid, 99½%, fib. dms., 100-lb. lots, frt. alld lb. 1.80 - —
fib. dms., 25-lb. lots, frt. alld. lb. 1.88 - —
l-Glutamine, bots., 1-9 kilo lots, kilo. 150.00 -300.00
Bots., 50-kilo lots ... kilo. 100.00 - —
Bots., 500-kilo lots ... kilo. 75.00 - —
Glycerine, dom., nat., crude, saponification, 88%, tanks dlvd lb. .21½- .21¾
nat., crude, soaplye, 80%, tanks, dlvd lb. .19 - .19¾
nat., refd., USP, CP, 99%, dms., c.l., dlvd lb. .30⅞- —
dms., l.c.l., dlvd. ... lb. .31⅛- —
tanks, dlvd. ... lb. .29⅛- —
Glycerine, dom., nat., refd., USP, CP, 96%, dms., c.l., dlvd lb. .30 - —
dms., l.c.l., dlvd. ... lb. .30¾- —
tanks, dlvd. ... lb. .28¼- —
nat., high gravity, dms., c.l., dlvd lb. .30¾- —
dms., l.c.l., dlvd. ... lb. .31½- —
tanks, dlvd. ... lb. .29 - —
syn., dms., c.l., dlvd. ... lb. .31 - —
dms., l.c.l., dlvd. ... lb. .31¾- —
tanks, dlvd. ... lb. .29¼- —
Imp., nat., crude, soaplye, 80%, c.i.f lb. .19 Nom.
Glycine (see Aminoacetic acid).
Glycerol (see Glycerine).
Glycolic acid (see Hydroxyacetic acid).
Glycolonitrile, 70%, aqueous, dms., c.l., t.l., works lb. .40 - —
dms., l.c.l., same basis ... lb. .42 - —
tanks, same basis ... lb. .39 - —
Glyoxal, 30%, dms., c.l., works lb. .20½- —
dms., l.c.l., works ... lb. .21¼- —
tanks, works ... lb. .18 - —
Golden seal root, NF, tested, bls. lb. 2.75 - 3.25
Gramicidin, 1 to 5 kilos, f.o.b. works, gram. 4.70 - —
Grapefruit oil, dms. ... lb. 3.00 - 3.50
Graphite, amorp., powd., bgs., fib. dms., ex whse lb. .06 - .09¼
Cryst., 88-90%, powd., bgs., fib. dms., ex whse lb. .19 - .21¼
90-92%, powd., bgs., fib. dms., ex whse lb. .21 - .23¼
95-97%, powd., bgs., fib. dms., ex whse lb. .29 - .31¼
Flake, No. 1, 90-95%, bgs., fib. dms., ex whse lb. .29 .31
No. 2, 90-95%, bgs., fib. dms., ex whse lb. .29 - .31
Grease, white, choice all hog, tanks, dlvd lb. .06⅞- .07
Yellow, tanks, dlvd. ... lb. .05¾- .06
Grease oil, No. 1, dms., c.l. ... lb. .13¾ Nom.
dms., l.c.l. ... lb. .14¾ Nom.
Extra winter, strained, dms., c.l. lb. .16¼ Nom.
dms., l.c.l. ... lb. .17¼ Nom.
Prime, burning, dms., c.l. ... lb. .17¾ Nom.
dms., l.c.l. ... lb. .18¼ Nom.

GREEN PIGMENTS
Green pigment quotations are listed individually. For example, prices on Green, chrome, may be found in the C's under Chrome green.

Grindelia robusta herb, bls. ... lb. .40 - —
Guaiacol, NF, cryst., dms., tins lb. 2.10 - 2.15
NF, liq., cbys., dms. ... lb. 2.30 - 2.40
Guaiacol carbonate, NF VII, dms lb. 3.40 - 3.45
Guaiacwood oil, cns. ... lb. .75 - 1.20
Guar gum, food grade, bgs., c.l lb. .38 - —
bgs., 5,000 lbs or more ... lb. .39 - —
Indust., bgs., c.l ... lb. .32 - —
Tech grade, bgs. ... lb. .30 - .33

GUMS
Gum quotations are listed individually. For example, prices on Gum, Dammar, may be found in the D's under Dammar gum.

Gypsum, plaster of Paris, 100-lb. paper bgs., trucks, dlvd. New York ton. 20.30 - —
Terra alba, dom., 100-lb. paper bgs., trucks, same basis. ton. 20.00 - —
100 lb. paper bgs., trucks, works, New York ton. 17.00 - —
Terra alba, imp., English, 100-lb. paper bgs., l.c.l., ex dock, New York ton. 55.00 - —
100-lb. paper bgs., ex whse. ton. 60.00 - 62.00

H

H acid, dry, bbls., c.l., frt. alld., 100% basis lb. .90 - —
bbls., l.c.l., same basis ... lb. .95 - —
Hansa yellow, 10 G, bbls., dlvd. E. of Rockies lb. 2.45 - —
Hansa G yellow, pigment, bbls ... lb. 2.20 - —
Hawthorn berries, bgs. ... lb. .18 - .20
Heliotropin, 100-lb. lots, dms. ... lb. 2.60 - 3.40
Hellebore root, dom., green, bls lb. .70 - .75
Helonias root, bls. ... lb. 1.50 - —
Hemlock oil, cns. ... lb. 2.55 - 3.00
Henbane leaves, bls. ... lb. .35 - .40
Heptachlor, dms., c.l., t.l., frt. alld., 100% basis lb. .95 - —
Heptane, indust., tankcars, New Jersey and New York gal. .20 - —
Houston, Texas ... gal. .1625- —
Hesperidin, purif., 100-lb. fib. dms., f.o.b., works lb. 8.95 - —
Hesperidin methylchalcone, bots., 50-lb. lots, works lb. 22.50 - —
bots., 5-lb. lots, works ... lb. 23.00 - —
bots., 1-lb. lots, works ... lb. 23.50 - —
Hexachlorophene, dms., 1,100 lbs. or more lb. 1.84 - —
dms., to 1,100 lbs. ... lb. 1.94 - —
Hexalin (see Cyclohexanol).
Hexamethylenetetramine, tech., bgs., 20,000-lb. lots or more, Perth Amboy or New York City lb. .233 - —
bgs., 1,000-19,999-lb. lots, same basis lb. .243 - —
bgs., smaller lots, same basis lb. .253 - —
fib. dms., 1,000-lb. lots or more, same basis lb. .250 - —
fib. dms., smaller lots, same basis lb. .253 - —
Hexamethylenetetramine, USP, bgs., 500 lbs. or more, f.o.b. Fords, N. J., dlvd. New York City and Philadelphia lb. .42½- —
bgs., smaller lots, same basis lb. .43½- .48⅛
Hexane, industrial, tankcars, New Jersey and New York gal. .20 - —
Houston, Texas ... gal. .16 - —
l-Hexanol, dms., c.l., works ... lb. .35 - —
dms., l.c.l., works ... lb. .35¼- —
tanks, works ... lb. .33 - —
Hexyl cinnamic aldehyde, dms lb. 4.00 - 7.50
n-Hexyl methacrylate, dms., c.l., works lb. .75½- —
dms., l.c.l., works ... lb. .76 - —
Hexyl salicylate, dms. ... lb. 1.75 - —
Hexylene glycol, dms., c.l., dlvd lb. .17½- —
dms., l.c.l., dlvd. ... lb. .19 - —
tanks, dlvd. ... lb. .15 - —
Hexylresorcinol, USP, dms., 25-lb. lots or more, dlvd lb. 14.00 - —
dms., smaller lots, dlvd. ... lb. 14.50 - —
Homatropine hydrobromide, USP, bots oz. 3.25 - —

D FORMALDEHYDE

Well said, Mr. Salesman. But don't forget that our good customer will want a reminder of other Celanese achievements in formaldehyde, such as low-cost paraformaldehyde and Formcel solutions (formaldehyde in various alcohols). He may be interested in higher concentration stabilized aqueous solutions now that they can be shipped at lower temperatures. Point out that we welcome every question on the subject of formaldehyde—and are ready to help him with the answers!

For more information, write to: Celanese Chemical Company, a Division of Celanese Corporation of America, Dept. 656-D, 180 Madison Avenue, New York 16, N.Y.

Celanese® Formcel®

Canadian Affiliate: Canadian Chemical Company Limited, Montreal, Toronto, Vancouver.
Export Sales: Amcel Co., Inc., and Pan Amcel Co., Inc., 180 Madison Ave., New York 16.

Celanese CHEMICALS

Hematropine methylbromide, USP, bots oz. 3.25 - —
Hoofmeal, 17-18% ammonia, bulk, c.l., Chicago unit-ton. 6.75 - —
Horehound herb, bls. lb. .18 - .20
Hydrastis (see Goldenseal).
Hydrazine hydrate, 85% ret. dms., works lb. 1.35 - 1.55
100% ret. dms., works lb. 1.60 - 1.90
Hydriodic acid, purif., 47%, 2-cbys., f.o.b. works lb. 2.92 - —
Hydroabietyl alcohol, tech., solid, dms., c.l., dlvd. zone 1 lb. .29¼- —
dms., l.c.l., dlvd. zone 1 lb. .29¾- .30¼
tanks, dlvd. zone 1 lb. .27¼- —

Zone 1 for hydroabieyl alcohol comprises all of continental US except Ariz., Calif., Colo., Idaho, Mont., Nev., N. M., Ore., Utah, Wash., Wyo., and the western part of Texas.

Hydrobromic acid, medicinal, 48%, cbys., frt. equald lb. .48 - .56
Hydrochloric acid, anhyd. (see Hydrogen chloride).
Hydrochloric acid, 18°, cbys., c.l., works 100 lbs. 2.50 - —
cbys., l.c.l., dlvd. Metropolitan area 100 lbs. 2.90 - 3.05
tanks, works, frt. equald ton 28.00 - —
20°, cbys., c.l., works 100 lbs. 2.75 - —
cbys., l.c.l., dlvd. Metropolitan area 100 lbs. 3.15 - —
tanks, works, frt. equald .. ton 30.00 - —
Hydrochloric acid, 22°, cbys., c.l., works 100 lbs. 3.25 - —
cbys., l.c.l., dlvd. Metropolitan area 100 lbs. 3.65 - —
tanks, works, frt. equald ton 35.00 - —
CP, USP, consumers, cbys., extra, c.l., works lb. .15¾- —
cbys., l.c.l., same basis lb. .17¼- .17¾
Hydrochloric acid, 5-pint bots., extra cs., c.l., same basis. lb. .20¾- —
Hydrocortisone acetate, bulk, bots., kilo lots or more gram. 1.10 - 1.90
Hydrocortisone alcohol, bulk, bots., kilo lots or more gram. 1.10 - 1.90
Hydrocyanic acid, dilute, NF, 2%, 5-pt. bots., f.o.b. works pt. .70 - —
Hydrofluoric acid, anhyd. (see Hydrogen fluoride).
Hydrofluoric acid, aqueous, 70%, 55-gal. or 30-gal. dms., c.l., t.l., dlvd 100 lbs. 19.25 - —
55-gal. dms., l.c.l., l.t.l., dlvd. 100 lbs. 20.75 - —
20-gal. dms., c.l., t.l., dlvd. 100 lbs. 21.00 - —
20-gal. dms., l.c.l., l.t.l., dlvd. 100 lbs. 22.50 - —
tanks, works frt. equald. 100 lbs. 13.40 - —

Delivered prices apply to all states east of Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Washington and Wyoming. In those states add $2.70 per cwt. for drum delivery.

Hydrofluosilicic acid, dms., works, 30% basis lb. .06 - —
Hydrofuramide, dms., fib. ctns., works lb. .30 - .40
50-lb. cyls., l.c.l., works lb. .55 - .60
Hydorgen chloride, anhyd., 50-lb. cyls., l.c.l., works lb. .45 - —
Hydrogen cyanide, liq., 98%, tanks, works lb. .14 - —
Hydrogen fluoride, anhyd., cyls., dlvd. E lb. .30½- .32½
cyls., dlvd. W. lb. .39 - —
tanks, works lb. .18 - —
Hydrogen peroxide, 35%, dms., c.l., dlvd lb. .202 - —
dms., l.c.l., dlvd. lb. .211 - —
tanks, dlvd. lb. .1800- —
Hydroquinone, photo grade, dms., 50-lbs., f.o.b. works lb. 1.10 - —
Tech., dms., c.l., dlvd. lb. .82½- —
dms., l.c.l., dlvd. lb. .84½- —
Hydroquinone monomethyl ether, dms., t.l., dlvd lb. 2.59 - —
dms., l.t.l., dlvd. lb. 2.61 - —
Hydroxyacetic acid, tech., 70% dms., Philadelphia and Chicago lb. .11 - —
tanks, Belle, W. Va. lb. .073 - —
Hydroxycitronellol, cns. lb. 4.85 - 5.75
Hydroxyethyl cellulose, add grades, fib. dms., 20,000-lb. lots or more, f.o.b. shipping point lb. .84 - —
fib. dms., 2,000 to 19,999-lb. lots, same basis lb. .89 - —
fib. dms., 100 to 1,999-lb. lots, same basis lb. .93 - —
fib dms., smaller lots, same basis lb. 1.03 - —
Hyoscine salts (see Scopolamine).
Hyoscyamine hydrobromide, bots.oz. 7.00 - —
Hyoscyamine sulfate, bots. oz. 7.00 - —

Hypophosphorous acid, purif., 50%, 10-cbys., f.o.b. works lb. 1.95 - —
NF, 50%, 10-cbys., same basis lb. 1.35 - —

I

Ichthammol, NF, dms. lb. .75 - 1.00
Indigo (see Dyes, coaltar, 1171 indigo, syn.).
Indole, CP, bots. lb. 14.75 - 18.35
Inositol, bots., dlvd. lb. 5.00 - —
dms., dlvd. lb. 4.50 - 4.75
Insect flowers (see Pyrethrum).
Iodine, crude, kgs. lb. .85 - —
Resub., USP, dms., f.o.b. works lb. 2.00 - 2.02
Iodochlorohydroquinolin, USP, dms. lb. 2.60 - —
Iodoform, NF, dms., 300-lbs., f.o.b. works lb. 4.90 - —
dms., 100-lbs., same basis lb. 5.05 - —
a-Ionone, cns. lb. 4.60 - 5.75
b-Ionone, cns. lb. 4.15 - 6.15
Ipecac root, whole, bgs. lb. 8.00 - 8.50
Powd., bbls., bxs. lb. 9.50 -10.00
Irish moss, bleached, prime, bls lb. .20 - .23
Iron blue, alkali-resisting, bbls., c.l., dlvd. E lb. .57 - —
bbls., l.c.l., ton lots, same basis. lb. .58 - —
bbls., smaller lots, same basis lb. .59 - —
Dom., reg., bbls., c.l., dlvd. E lb. .52 - —
bbls., l.c.l., ton lots, same basis lb. .53 - —
bbls., l.c.l., smaller lots, same basis lb. .54 - —
Imp., British, reg., bbls., c.l., dlvd. E lb. .48 - —
bbls., l.c.l., ton lots, same basis lb. .49 - —
bbls., l.c.l., smaller lots, same basis lb. .50 - —

Iron blue dlvd. prices 1c. higher for Pacific Coast states: Wash., Ore., Cal., N. M., Ariz., Mont., Wyo., Utah, Col. and Nev.

Iron compounds (see Ferric or Ferrous).
Iron oxide, black, pure, bgs., c.l., works lb. .14¾- —
bgs., l.c.l., works lb. .15 - —
Iron oxide, brown, pure, bgs., c.l., works lb. .14¼- —
bgs., l.c.l., works lb. .14½- —
Iron oxide, metallic, brown, bgs., works lb. .05¼- —
Iron oxide, Persian Gulf, red., bgs., c.l., works lb. .08¾- —
Iron oxide, red, dom., pure, bgs., Bethlehem, East St. Louis, New York City lb. .14¼- —
Iron oxide, red, nat., 75-85% ferric oxide, bgs., c.l., works lb. .06¼- —
bgs., l.c.l., works lb. .06½- —
Iron oxide, Spanish red, bbls., c.l., ex dock lb. .05¾ Nom.
bbls., l.c.l., ex dock lb. .06 Nom.
bbls., l.c.l., ex whse, New York. lb. .06½ Nom.
Iron oxide, yellow, nat., French type, bgs., c.l., works lb. .06¼- —
Peruvian type, bgs., l.c.l lb. .023 - .024
Iron oxide, yellow, pure, light lemon shade, bgs., c.l., works lb. .12¼- —
Other shades, same basis lb. .12 - —
Isoamyl alcohol, dms., c.l., works, frt. alld E lb. .27½- —
dms., l.c.l., same basis lb. .29 - —
tanks, same basis lb. .25 - —
Isoborneol, cns. lb. 1.44 - 1.80
Isobornyl acetate, cns. lb. .46 - .56
Isobornyl formate, dms. lb. 1.20 - —
Isobornyl proprionate, dms. lb. 1.25 - 1.35
Isobutyl acetate, perfume grade, cns lb. .35 - —
Isobutyl acetate, solvent grade, dms., c.l., dlvd. E. of Rockies lb. .15¼- —
dms., l.c.l., same basis lb. .16¼- —
tanks, same basis lb. .12¾- —
Isobutyl alcohol, dms., c.l., dlvd lb. .15 - —
dms., l.c.l., dlvd. lb. .17 - —
tanks, dlvd. lb. .12 - —
Isobutylene, 99%, tanks, works gal. .38 - —
Isobutyl isobutyrate, dms., f.o.b. works lb. .75 - —
Isobutyraldehyde, CP, dms., c.l., dlvd lb. .27½- —
dms., l.c.l., dlvd. lb. .29½- —
Tech., dms., c.l., dlvd. lb. .22 - —
dms., l.c.l., dlvd. lb. .23 - —
tanks, dlvd. lb. .19½- —
Isobutyronitrile, dms., c.l., dlvd lb. .72 - —
dms., l.c.l., same basis lb. .57 - —
Isobutyric acid, dms., c.l., t.l., dlvd. lb. .35 - —
dms., l.c.l., l.t.l., same basis lb. .36½- —
l.c., t.l., same basis lb. .33 - —
Isoeugenol, cns. lb. 3.46 - 4.25
Isoniazid, powd., bulk, kilo or more kilo 18.00 - —
Isonicotinic acid, 100-lb. fib. dms., works lb. 4.25 - —
Isonicotinic acid hydrazide (see Isoniazid).
Iso-octyl alcohol, dms., c.l., dlvd. E. lb. .23½- —
dms., l.c.l., dlvd. E. lb. .25 - —
tanks, dlvd. E. lb. .21 - —
Isopentane, com'l. grade, tanks, f.o.b. Tex. refy. gal. .15½- —
Isophorone, dms., c.l., works lb. .24½- —
dms., l.c.l., works lb. .25¼- —
tanks, works lb. .22½- —
Isophthalic acid, dms., c.l., works, frt. equald lb. .18 - —
dms., l.c.l., same basis lb. .19 - —
Isopropanol (see Isopropyl alcohol).
Isopropyl acetate, dms., c.l., dlvd. lb. .14 - —
dms., l.c.l., same basis lb. .15½- —
tanks, same basis lb. .11½- —
Isopropyl alcohol, refd., 91%, dms., c.l., dlvd gal. .58 - —
dms., l.c.l., dlvd. gal. .48 - —
tanks, dlvd. gal. .42 - —
Isopropyl alcohol, refd., 95%, c.l., dms., dlvd gal. .60 - —
dms., l.c.l. dlvd gal. .70 - —
tanks, dlvd gal. .44 - —
anhyd., c.l., dlvd. gal. .62 - —
dms., l.c.l., dlvd gal. .72 - —
tanks, dlvd. gal. .46 - —
Isopropyl benzene (see Cumene).
Isopropyl ether, dms., c.l., dlvd lb. .09½- —
dms., l.c.l., dlvd lb. .11 - —
tanks, dlvd. lb. .07 - —
Isopropyl-N-3-chlorophenyl) carbamate (CIPC), tech., dms., c.l., t.l., works lb. 1.00 - —
dms., l.c.l., works lb. 1.05 - 1.25
tanks, works. lb. .99 - —
Isopropylamine (see Mono, Di, or Tri-).
Isopropyl-N-phenyl carbamate, 450-lb. fib. dms., c.l., t.l., works lb. .75 - —
450-lb fib dms., l.c.l., works lb. .80 - .90
Isoquinoline, dms., works lb. .45 - 1.25

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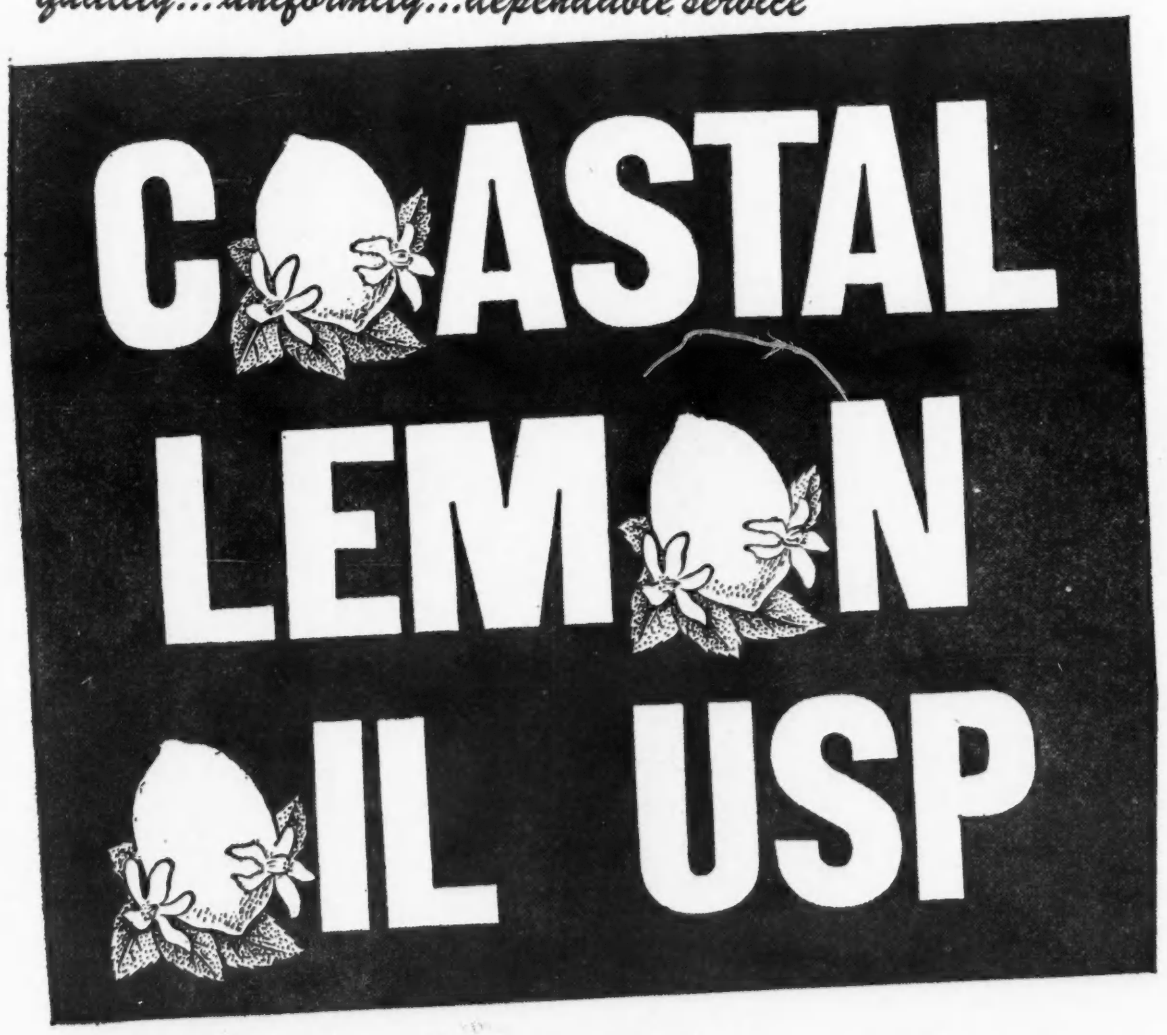

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Itaconic acid, refd. bgs. c.l., f.o.b. works	lb.	.53½-	—
bgs., l.c.l., same basis	lb.	.54½-	—
Tech., bgs., c.l., same basis	lb.	.38½-	—
bgs., l.c.l., same basis	lb.	.39½-	—

J

J acid, paste, bbls., works, 100% basis	lb	2.70	—
Powd., bbls., same basis	lb	2.75	—
Jalap root, NF, bls.	lb.	.60	—
NF, powd., bbls., bxs.	lb.	.70	.75
Japan wax, cs	lb.	.27	.29
Juniper berries, bgs	lb.	.16	.17
Juniper berry oil, NF, bots	lb.	2.90	3.75
Twice rectified bots.	lb.	3.25	—
Juniper tar oil NF dms	lb.	.42	.60
Juniper wood oil, tech., cns.	lb.	.38	.55

K

Kaolin (see also Clay, China).			
Kaolin, NF, powd., fib. dms.	lb.	.10	.12
NF, colloidal, 50-lb. bgs	lb.	.15½	.17½
Karaya gum No 1, NF powd. bls	lb.	.45	.48
No. 2, powd., bbls.	lb.	.40	.42
No. 3, powd., bbls	lb.	.35	.37
Koch acid, bbls., frt. alld., 100% basis	lb	1.00	—
Kola nuts, bgs.	lb.	.13	.15

L

L acid, bbls., works	lb.	1.25	—
Lacquer diluent, petroleum, 140°F-200°F b.r., tankcars, New Jersey and New York	gal.	.20	—
Group 3	gal.	.15125-	—
Houston, Texas	gal.	.16	—
200°F-240°F b.r., tankcars, New Jersey or New York	gal.	.20	—
Group 3	gal.	.14125-	—
Houston, Texas	gal.	.16	—
Lactic acid, edible, 50%, bbls, dms., c.l., frt. equald	lb.	.1985-	—
bbls., dms. 20 or more, frt. equald	lb.	.2035-	—
bbls. dms. 5 to 19 frt equald.	lb.	.2085-	—
bbls., dms., 1 to 4, frt. equald.	lb.	.2135-	—
80%, bbls., c.l., dms., frt. equald	lb.	.3335-	—
bbls., dms., 20 or more, frt. equald	lb.	.3385-	—
bbls. dms 5 to 19 frt equald.	lb.	.3435-	—
bbls., dms., 1 to 4, frt. equald.	lb.	.3485-	—
Plastic grade, 50%, c.l., bbls., works	lb.	.2740-	—
bbls. 20 or more works	lb.	.2790-	—
bbls., 5 to 19, works	lb.	.2840-	—
bbls. 1 to 4, works	lb.	.2890-	—
80%, bbls., c.l works	lb.	.4625-	—
bbls. 5 to 19 works	lb.	.4725-	—
bbls. 1 to 4, works	lb.	.4775-	—
Tech., 44%, bbls., c.l., works, 100 lbs.		12.45	—
bbls., l.c.l., works	100 lbs.	12.85	—
USP, 85% chys.	lb.	.85	—
Lactose, crystalline, edible, bgs., 23,000-lb lots, frt equald	lb.	.14	—
bgs., 6,000-lb lots, frt equald	lb.	.14½-	—
bgs., 2,000-lb lots, frt equald	lb.	.14¾-	—
bgs., 200-lb lots, frt equald	lb	15¼-	—
Edible lactose in 6lb dms. ½c higher			
Lactose, terment grade bgs., c.l., works	lb.	.08½-	—
USP, reg., fib. dms., 30,000-lb. lots, frt. equald	lb.	.21½-	—
6lb. dms., 2,000-lb lots, frt. equald	lb.	.22¼	—
200-1,880-lb. lots, frt. equald	lb.	.22¾-	—
USP lactose in bags ½c to 1c lower			
Lactose, USP spray dried, bgs., l.c.l., frt. equald	lb.	.18½-	—
bgs., l.c.l. frt equald	lb	19	.19¾
Lady's slipper root, bls	lb.	3.00	3.50
Lamp black, bgs. c.l., works	lb.	.16	.45
Lanolin, USP, anhyd., 400-lb. dms., works	lb.	.24	.26
USP, anhyd., cosmetic, 400-lb. dms., works	lb.	.26	.30
USP, hydrous, 400-lb. dms., works,	lb.	.24	—
Lard, cash, dms., Chicago	lb.	.0920-	—
Lard oil (see Grease oil).			
Larkspur seed, bgs	lb.	.40	.45
Laurel leaf oil, dms. cns.	lb.	9.75	12.50
Laurent's acid, bbls	lb.	.70	—
Lauric acid, pure, dms	lb.	.38½-	.41
tanks	lb.	.36	.37
Lauryl alcohol, bots.	lb.	2.00	2.50
n-Lauryl methacrylate, dms., c.l., t.l. works	lb.	.65½-	—
dms., t.t.l., works	lb.	.66	—
Lavandin oil, 22-24%, dms.	lb	1.10	1.50
Abrial, dms.	lb	1.00	1.50
Lavender flowers, medium, bls	lb.	.55	.60
Ord., bls.	lb.	.20	.25
Select., bls.	lb.	.90	1.00
Lavender flower oil, USP, French 35-37% ester, cns	lb.	1.85	4.00
40-42% ester cns	lb	5.00	7.75
Spike, Spanish, cns	lb	2.20	3.00
Lead acetate, NF cryst., gran., powd., bbls	lb.	.34½-	—
White, cryst., bbls.	lb.	.25½-	—
gran., bbls.	lb.	.26½-	—
powd. bbls.	lb.	.26½-	—
Lead arsenate acid powder dealers, 3-50 lb. bgs or any quantity, frt. alld. on $150 or more	lb.	.30½-	—
1-lb bgs. same basis	lb.	.47	—
Lead, blue, basic sulfate bbls., c.l., shipt point, frt alld.	lb.	.17	—
bbls., l.c.l. same basis	lb.	.18	—
Lead carbonate (see Lead, white, basic carbonate)			
Lead chloride, dms.	lb.	.52	—
Lead iodide NF V jars	lb	3.82	—
Lead linoleate, fused, 26% Pb, dms.	lb.	.38	—
Lead metal, prime, pigs, New York.	lb.	.12½-	—
St. Louis	lb.	.1230-	—
Lead monosilicate, bgs., c.l., works, frt. equald	lb.	.1385-	—
bgs., l.c.l., same basis	lb.	.1485-	—
Lead naphthenate, liq., 16% Pb, dms., dlvd	lb.	.19½-	—
24% Pb, dms., dlvd.	lb.	.24¼-	—
Solid, 37% Pb, dms., dlvd.	lb.	.31¾-	—
Lead nitrate, bbls.	lb.	.24¼-	.26¾
Lead orthosilicate-gel, 50-60% PbO, dms., works	lb.	.29¾-	.34¼
Lead peroxide, tech, powd. bbls	lb.	.45	.50
Lead phthalate, dibasic, dms., works.	lb.	.41	—
Lead, red, 95% Pb_3O_4, or less, bbls., c.l., works, frt. equald.	lb.	.1425-	—
bbls., l.c.l., same basis.	lb.	.1525-	—
97% Pb_3O_4, bbls., c.l., same basis	lb.	.1445-	—
bbls, l.c.l., same basis	lb.	.1545-	—
98%, Pb_3O_4, bbls., c.l., same basis	lb.	.1460-	—
bbls., l.c.l., same basis	lb.	.1560-	—
Lead resinate precip, 23% Pb, dms., ton lots, dlvd	lb.	.43¾-	—
Lead salicylate, normal, dms. works,	lb.	.46	—
Lead silicate (see Lead white basic silicate).			
Lead silicochromate, bgs., c.l., f.o.b. mfrs. point, frt. alld	lb.	.20	—
bgs., l.c.l., same basis	lb.	.21	—
Lead sulfate (see Lead blue basic sulfate).			
Lead tallate, liq., 16% Pb, dms.	lb.	.17¼-	—
24% Pb, dms	lb.	.26¾-	—
Solid, 30% Pb, dms.	lb.	.23¼-	—
Lead, white, basic carbonate, bgs., c.l., shipt. pt. frt. alld	lb.	.18	—
bgs., l.c.l., same basis	lb.	.19	—
basic silicate, bgs., c.l., shipt. pt., frt. alld	lb.	.16½-	—
bgs., l.c.l., same basis	lb.	.17½-	—
basic silicate, bgs., c.l., shipt. pt., frt. alld	lb.	.17	—
bgs. l.c.l., same basis	lb.	.18	—
Lecithin, edible, tech., bleached, non-ret. dms., c.l., works.	lb.	.14	.15
non-ret. dms., l.c.l., same basis	lb.	.15	.16
unbleached, non-ret. dms., c.l., same basis	lb.	.13	.14
non-ret. dms., l.c.l., same basis	lb.	.14	.15
Lemon bioflavonoid complex, 100-lb. package, works	lb.	6.45	—
Lemon oil, USP, Calif., cns., dms.	lb.	1.40	1.50
Messina, cns.	lb.	3.25	4.00
Lemongrass oil, cns., dms.	lb.	2.00	2.55
dl-Leucine, dms. works	lb.	12.25	15.00
Licorice root, gran., bls.	lb.	.13	—
Powd., bls.	lb.	.15	.16
Whole, bls.	lb.	.09	.10
Lignaloe wood oil, Mexican, cns	lb.	2.75	3.50
Lignosulfonate (see under ammonium or sodium lignin sulfonate)			
Lime, chemical (quicklime), bulk, c.l., 50,000 lbs., works, E.	ton.	14.25	—
Chemical, hydrated, bgs., c.l., same basis	ton.	17.25	—
Chemical, spray, bgs. c.l., same basis	ton.	18.25	—
For New York delivery, add $6.29 freight charge			
Lime oil, dist., Mexican, cns.	lb.	5.90	6.75
West Indian, cns.	lb.	6.50	7.80
Expressed, West Indian, cns	lb.	7.75	8.75
Lime salts (see Calcium).			
Lime-ammonium nitrogen, 20.5% N (see Ammonium nitrate with dolomite).			
Linalool, ex bois de rose oil, dms.	lb.	2.90	3.75
Syn., 98-100%, dms., works	lb.	3.20	3.60
Linalyl acetate, ex bois de rose, 90-92%, dms	lb.	2.75	3.40
96-98%, dms.	lb.	3.25	—
Syn., 98-100%, dms., works	lb.	3.40	—
Lindane, 25% formulation to distributors dms., frt alld	lb	1.35	1.50
Lindane, tech., to formulators, 250-lb. dms., 5,000 lbs., dlvd	lb.	2.13	—
100-lb. dms., 5,000-lbs, dlvd	lb.	2.15	—
250-lb. dms., less than 5,000-lbs., dlvd	lb.	2.18	—
100-lb. dms., less than 5,000-lbs., dlvd	lb.	2.20	—
Linden flowers, with leaves, bls	lb	.35	.40
Without leaves, bls	lb.	.42	.45
Linseed meal, expeller, 32% bulk, Minneapolis, mills	ton.	65.50	—
Extracted, 34% bulk, same basis	ton.	55.00	—
Linseed oil, raw, dms., c.l., New York	lb.	.1660-	—
dms., l.c.l., New York	lb.	.1750-	.18
tanks, f.o.b. Minneapolis	lb.	.13	—
tanks, New York	lb.	.1411-	—
tankwagon, New York	lb.	.1461-	—
Boiled linseed oil, .006c. per lb. higher			
Linseed oil, acid, dist., dms	lb.	.2010-	—
Water-white, dms.	lb.	.2310-	—
Litharge, coml., powd. bbls., c.l., works, frt. equald	lb.	.1375-	—
bbls., l.c.l., same basis	lb.	.1475-	—
Lithium aluminum hydride, lump, dms., works	lb	33.00	39.00
Lithium benzoate, dms.	lb	1.65	1.67
Lithium bromide, NF, gran., bgs., works, frt. equald	lb.	2.60	—

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U. S. P.

An *Exclusively First Grade Lemon Oil* . . . Cold Pressed in California . . . and *Packed by the Producer* to Assure Highest Quality

For nearly 30 years, Mutual Citrus Products Co. has been cold-pressing California lemon oil for distribution by others. Now, M.C.P. LEMON OIL is being *prepared and packed* under the M.C.P. label. There is only *one label* and *one* quality — *the highest* — for M.C.P. LEMON OIL. Yet, M.C.P. LEMON OIL costs you *less* . . . while providing a product that is unsurpassed for flavor, purity, and dependability . . . for *every* purpose.

Produced and Packed by

MUTUAL CITRUS PRODUCTS COMPANY
Since 1928 Growers and Processors of Citrus Products

Distributed by

MUTUAL CITRUS PRODUCTS CO.
424 South Atchison Street, Anaheim, Calif.

R. D. WEBB & CO., INC.
137 Boston Post Road, Cos Cob, Conn.

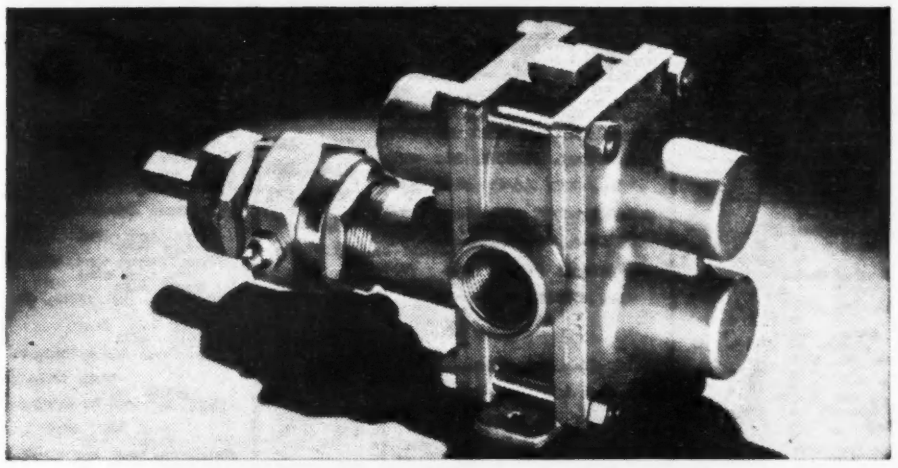
Lithium carbonate, NF, dms., c.l., t.l., dlvd lb. 1.29½ - —
dms., ton lots to t.l., dlvd lb. 1.30 1.30½
Tech., dms. c.l., t.l., frt alld lb. .67 - —
dms., ton lots, same basis lb. .73 - —
dms., smaller lots, same basis, lb. .79 - —
Lithium chloride, CP, anhyd., dms., ton lots lb. 1.23½ - —
Tech. anhyd., dms. c.l., t.l., dlvd. or works, frt. alld lb. .87 - —
dms., t.c.l., same basis lb. .88 - .92
Lithium citrate, NF, dms. ton lots, lb 1.50 - —
Lithium fluoride, dms., 20,000-lb. lots, dlvd lb 2.15 - —
bbls. ton lots and more dlvd lb 2.18½ - —
bbls., less ton lots, dlvd lb 2.23½ - —
Lithium hydride powd. dms., 500-lb lots or more works lb 9.50 - —
Lithium hydroxide, monohydrate, dms. c.l., t.l. frt alld lb. 72 - —
dms. t.c.l. frt alld lb 73 - —
Lithium manganite cms., works lb. .95 1.05
Lithium nitrate tech. dms., 100-lb lots lb 1.15 1.25
Lithium salicylate, dms lb 1.60 1.70
Lithium silicate, dms., works lb 1.10 1.20
Lithium stearate dms. c.l., works, lb. .47½ —
dms., ton lots, works lb. 48½ —
dms., less-ton lots, works lb. 53½ —
Lithium sulfate, dms., 100-lb. lots, lb. 1.15 1.25
Lithium titanate, dms., works lb. 1.15 1.25
Lithol red toner, barium, bbls., works lb .68 —
Lithol-rubine red toner, pure bbls., works lb 1.50 - —
Resinated, bbls., works lb 1.47 - —
Lithopone ord. bgs. c.l., dlvd E. lb. .08⅜ —
bgs. t.c.l. dlvd E lb. 0.3½ —
Titanated (high-strength), bgs., c.l., dlvd lb. .11 - —
bgs., t.c.l. dlvd. lb. .12 - —
Lobelia herb bls lb. .55 — —
Lobeline sulfate, bots., 50-oz. lots, works oz 30.00 —
Locust bean gum, powd., bgs. lb. .35 - .40
Lycopodium, cs. lb. 3.25 - 3.50
l-Lysine monohydrochloride, 25-lb. dms lb. 4.95 - —

M

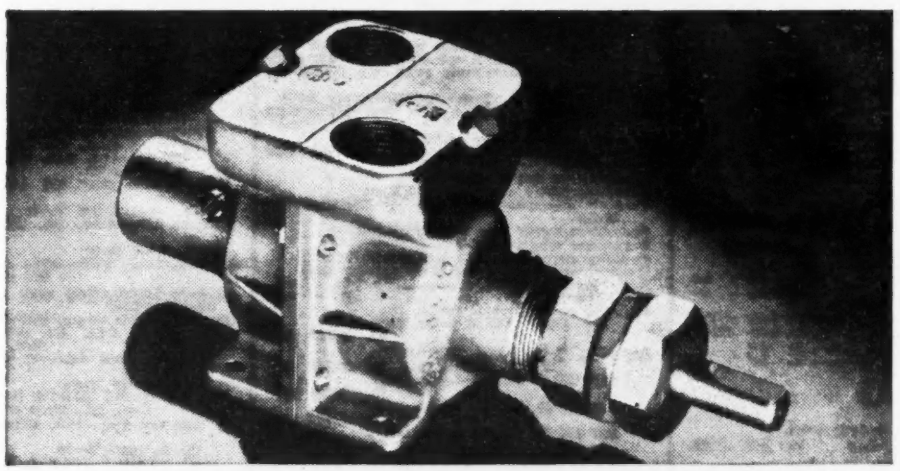
Mace, Siauw, No. 1, bls. lb. 1.90 - —
No. 2, whole, bls lb. 1.65 - —
siftings, bls. lb. 1.60 - —
Mace oil, dist. cns. dms lb 9.75 12.25
Magnesia calcined tech. bgs., ctns., frt equald lb. .25¾ .26½
Tech. syn., rubber grade, light, bgs., c.l. frt equald lb. .28¾ .30
rubber grade, extra light, bgs., c.l., frt equald lb. .28 —
bgs., t.c.l., frt equald lb 28¾ —
Above prices are quoted f.o.b works, freight equald, with Metropolitan New York and competitive producing points
Magnesia, calcined, tech., heavy, 85% bgs., c.l., f.o.b. Luning, Nev ton 39.50 - —
91% bgs., c.l. same basis, ton 49.50 - —
95%, bgs., c.l., same basis, ton 59.00 —
USP, light, bgs. lb. .36½ - .37½
USP, heavy, bgs. lb. .36½ - .37½
Magnesite, chemical grade, calcined, powd. bgs c.l., works, frt equald ton 86.25 - —
Chemical grade, deadburnt, standard grain, bulk, c.l., Chewelah, Wash. ton 46.00 - —
Magnesium bromide, cs. bars lb .95 1.00
Magnesium carbonate, tech., bgs., c.l., frt equald lb. .11 - —
bgs., t.l., frt equald lb. .11½ - —
bgs., t.c.l. frt equald lb. .13½ .14
USP bgs., c.l., frt. equald lb. .13½ - —
bgs. t.l., frt. equald lb. .14 - —
bgs., t.c.l. frt equald lb 15 16
Above prices are quoted f.o.b works, freight equald, with Metropolitan New York and competitive producing points.
Magnesium chloride, anhyd., 92%, flake or pebble, dms. c.l., works lb. .12¾ —
dms. t.c.l., works lb. .14 .15
Hydrous, 99%, flake, bgs., c.l., works ton 55.00 - —
bgs. t.c.l., works ton 65.00 - 80.00
Magnesium gluconate, 100-lb. dms., f.o.b works E lb. 1.42 - —
Magnesium hydroxide, NF, powd., dms., 500-lbs. or more, f.o.b., works lb. .24½ .25½
Magnesium lauryl sulfate, dms., c.l., frt. alld lb. .22½ - —
dms., t.t.l., frt. alld lb. .23½ - —
tanks, frt. alld lb. .21½ - —
Magnesium metal, 99.8%, ingots, 10,000-lb. lots or more, works lb. .36 - —
pigs, 10,000-lb. lots or more, works lb. .35¼ - —
sticks, cs. works frt. alld. on carlots lb. .59 - —
Magnesium nitrate, cryst., dms., works lb. .29 - —
Magnesium oxide (see Magnesia, calcined).
Magnesium phosphate tribasic, NF, bbls lb. .75 - —
Magnesium silicate (see Talc).
Magnesium silicofluoride, dms., works lb. .10½ - .12
Magnesium sulfate, tech., bgs., c.l., works 100 lbs. 2.15 - —
bgs., t.c.l., works. 100 lbs. 2.90 - 3.15
USP, cryst., bgs., c.l., works, 100 lbs. 2.35 - —
bgs, t.c.l., 5,000 lbs., 1 withdrawal 100 lbs. 3.10 - —
bgs, smaller lots 100 lbs. 3.35 - —
Magnesium trisilicate, USP, fib. dms., 5,000-lb. lots lb. .38 - —
fib dms., 1,000-lb lots lb. .40 - —
fib. dms., 100-lb. lots lb. .45 - —
Bulky and super grades of magnesium trisilicate 7c. per lb. higher.
Malachite green, straight, PTA, bbls works lb. 5.30 - —
Malathion, dms., c.l., works lb. .89 - —
dms., t.c.l., works lb. .92 1.01
Maleic acid, cryst. powd. dms lb. .37¼ - —
Maleic anhydride, dms., c.l., frt. equald lb. .23½ - —
dms., t.c.l., frt. equald. lb. .25 - —
tanks, frt. equald lb. .22½ - —
Malic acid, tech., dms. lb. .50 - —
Mandelic acid, NF, dms., 1,000-lb. lots lb. 2.35 - —
dms. smaller lots lb 2.40 - 3.50
Mandrake root, bls lb. .40 - —
Manganese acetate, dms. dlvd lb. .35 - —
Manganese borate, tecn., fib. dms. lb. .23½ - —
Manganese carbonate, chemical grade, 46% Mn, bgs., 20,000-lb. lots and more, works lb. .11 - .16
Manganese chloride, CP, anhyd., dms., 20,000-lb. lots, works lb. .21¾ - —
smaller lots, works lb. .23½ - —
Manganese dioxide, African, 83-87%, 40,000 to 99,999-lb. lots, burlap paper lined bgs., gross for net works ton 148.00 - —
40,000 to 99,999-lb. lots, paper bgs., same basis ton 144.50 - —
40,000 to 99,999-lb. lots, dms. same basis ton 152.50 - —
Prices for manganese dioxide in 10,000 to 40,000-lb. lots $3 per ton higher
Manganese gluconate, dms lb. 1.84 - —
Manganese hydrate, dms., dlvd lb. .35 - —
Manganese hypophosphite, NF dms. lb. 3.52 - —
Manganese linoleate liq. 4.35% Mn, dms lb. .35¾ - —
Solid, precip., 8.2% Mn. bbls lb. .41¼ - —
Manganese metal, electrolytic, dms., c.l., dlvd E lb. .34 - —
dms., ton lots, dlvd E. lb. .36 - —
dms., smaller lots, dlvd. E. lb. .38 - —
Manganese naphthenate, liq., 6% Mn. dms frt alld lb. .29¾ - —
Manganese resinate, fused, 3½% Mn, dms lb. .29¼ - —
Precip., 6½-7% Mn, dms. lb. .37 - —
Manganese sulfate, fertilizer grade, 65% $MnSO_4$, bgs c.l. dlvd., S. E ton 86.50 - —
bgs., l.c.l., dlvd. S. E ton 93.50 - —
Manganese tallate, 6% dms lb. .26½ - —
Manila copal gum, C, bgs. lb. .35 .39
DBB bgs. lb. .25 .28
DK, bgs. lb. No stocks.
DK, dust bgs. lb. .14 Nom.
MA, soft, bgs. lb. .20 .24
WS, bgs. lb. No stocks.
Mannitol, com'l fib dms., ton lots, works lb. .60 - —
fib dms. to ton lots, works lb. .62 - —
fib. dms., single dm., works lb. .65 - —
Marine pitch, dms lb. .04¼ - .05
MBTS (see Mercaptobenzothiazyl disulfide)
MBT (see 2-Mercaptobenzothiazole).
Melamine, bgs., c.l., works lb. .26 - —
bgs., l.c.l., works lb. .27½ - —
Menadione USP, bots. gram. .044 .05
Menhaden oil, crude, tanks, works, Atl. & Gulf lb. .06¾ —
Menthol, nat., USP, Brazilian, large crystals, cs lb. 8.25 - 9.00
Nat., USP Brazilian, regular crystals, cs. lb. 8.50 - —
Japanese, cs. lb. 12.00 - —
Syn., USP, racemic, 25-lb. lots lb. 4.25 - —
2-Mercaptobenzothiazole, bgs., fib. dms. ton lots, works, frt. alld lb. .44 - —
bgs. fib dms. less ton lots, same basis lb. .46 - —
Mercaptobenzothiazyl disulfide, bgs., fib dms. ton lots, works, frt. alld lb. .54 - —
bgs. fib dms. less ton lots, same basis lb. .56 - —
Mercuric chloride, NF cryst. dms., 50-lb lots or more lb 4.98 - —
USP, gran. or powd., 50-lb. dm., 100 lbs. f.o.b. works lb 4.78 - —
Mercuric cyanide, NF VIII, powd., fib dms lb 6.84 - —
Mercuric iodide red, NF, 100-lb. dm. f.o.b works lb. 7.72 - —
Mercuric oxide, red., NF IX, 50-lb. dm. 100 lbs. f.o.b works lb. 5.97 - —
tech., 50-lb. dm., 100 lbs., same basis lb 5.77 - —
Mercuric oxide, yellow, NF, 50-lb. dm., 100 lbs., same basis lb. 6.14 - —
tech. bbls 1,000 lb lots lb 5.58 - —
bbls. smaller lots lb 5.60 - —
Mercurous chloride (see Calomel)
Mercurous iodide, yellow, NF, 100-lb. dm., f.o.b. works lb. 8.22 - —
Mercury, ammoniated (see White precipitate USP XV).
Mercury metal, 76 lbs. per flask net-flask 215.00 - 217.00
Mesityl oxide, dms., c.l., dlvd. lb 15 —
dms., t.c.l., dlvd. lb 16½ —
tanks, dlvd lb 12½ —
Meta-aminophenol (see m-Aminophenol).
Metachloroaniline (see m-Chloroaniline).
Metanilic acid, dms. works lb .57 .75
Metanitroparatoluidine (see m-Nitro-toluidine).
Metan-troanline (see m-Nitroanilize).
Metaphenylenediamine (see m-Phenylenediamine).
Metatoluidine (see m-Toluidine).
Metatolylenediamine (see 2,4-tolylenediamine).
Methacrylic acid, glacial, 98%, dms., truckloads, frt. equald lb. .42½ - —
dms., smaller lots, frt equald, lb. .43 - .75
tanks, works, frt equald lb. .40 - —
Methanol, nat., denaturing grade, tanks, frt alld gal. .85 - —
Syn. zone 1, dms. c.l or t.l. min., dlvd gal. .51½ - —
dms., t.c.l., dlvd gal. .61½ - —
tankwagon, 2,000-4,000 gal. lots, dlvd Metropolitan area gal. .35 - —
tankwagon, 4,000 gal. min., dlvd gal. .30 - —
tankwagon, 4,000 gal. min., f.o.b terminal gal. .29 - —
Syn., zone 2, dms., c.l., or t.l., min., frt. alld or dlvd gal. .55½ - —
dms., t.c.l., works gal. .65½ - —
tankwagon, 2,000-4,000 gal. lots, min., dlvd., Metropolitan area gal. .39 - —
tanks, 4,000 gal. min. dlvd. gal. .34 - —
Synthetic methanol zones are: Zone 1 is all continental US E. of eastern boundaries of Ariz., Idaho and Utah. Zone 2 is remainder of US west of above state boundaries comprising Ariz. Calif., Idaho, Nev., Ore., Utah and Wash.
Methapyrilene fumarate, 100-999 lbs., dms., f.o.b. works, frt. equald lb. 21.75 - —
Methapyrilene hydrochloride, 100-999 lbs., dms., f.o.b. works, frt equald lb. 27.25 - —
Methenamine (see Hexamethylenetetramine).
Methionine hydroxyanalogue, (calcium salt) 90% min., dms., t.l., frt. alld. lb. 1.10 - —
dms., l.t.l., same basis lb. 1.16 - —
dl-Methionine, fib dms., frt. alld. 50-lb or more lb. 3.50 - —
Feed grade, 98%, fib. dms., same basis lb. 1.55 - —
Methoxychlor, 50% wettable powder, dealers, dms., cs. lb. .66 - —
Methyl abietate, non-ret. dms., c.l., dlvd. zone 1 lb. .21½ - —
non-ret. dms., t.c.l., same basis lb. .22 - .22½
Methyl abietate, hydrogenated, non-ret. dms., c.l., dlvd. zone 1 lb. .23½ - —
non-ret. dms., t.c.l., same basis, lb. .24 .24½
Zone 1 includes New England and Middle Atlantic states, Va., W. Va., N. C., Ohio., Ky., Mich., Ind., Ill., Wis., St. Paul and Minneapolis, Minn.; St. Louis, Mo.; Miss., Ala., Ga., Fla., S. C. and Tenn.
Methyl acetone, nat., dms., t.c.l., E. of Miss., frt alld gal. .62½ - —
Syn., dms., c.l., frt. alld E gal. .65 - —
dms., t.c.l., frt alld E. gal. .76 - —
tanks, frt alld E gal .51 —
Synthetic methyl acetone E. territory comprises all states East of and including Colo., Mont., N. Mex. and Wyo. West territory is made up of all states west of those four.
Methyl acrylate, dms., c.l., t.l., dlvd. lb. .39 - —
dms., t.l.l., dlvd. lb. .40 - —
tanks, dlvd lb. .37 - —
Methyl alcohol (see Methanol).
Methyl amyl acetate, dms., c.l., dlvd. E lb. .17 - —
dms., t.c.l., dlvd. E. lb. .18½ - —
tanks, dlvd E lb .14½ - —
Methyl amyl alcohol, dms., c.l., dlvd. lb. .17 - —
dms., t.c.l., dlvd. lb. .18½ - —
tanks, dlvd lb. .14½ - —
Methyl amyl ketone, dms. works lb. 1.05 - —
N-Methylaniline, tech. tanks, frt alld lb. .60 - —
Methylanthranilate, cns. lb. 2.45 - 3.00
Methyl benzoate, cns., dms. lb. .60 - .75
Methyl bromide, service organization prices, 40 to 375-lb. cyls., large lots, frt. alld lb. .62 - .68
Methyl cellulose, special vis., (1,500-4,000 cps.) 50-lb. bgs., c.l., works lb. .82 - —
50-lb. bgs., 2,000-lb lots and more, same basis lb. .89 - —
50-lb. bgs., smaller lots, frt. alld on 100 lbs lb. 1.05 - —
Standard vis. (15,400 cps.) 50-lb. bgs. c.l., frt alld lb. .69 - —
50-lb bgs., 2,000-lb lots and more, same basis lb. .76 - —
50-lb bgs. smaller lots, frt. alld. on 100-lbs lb. .79 .85
Methyl chloride, indust. cyls., frt. equald lb. .22¼ - —
tanks, multi-unit, same basis, lb. .16¼ - —
tanks, single unit, same basis, lb. .12¾ - —
Refrigerator mfrs., cyls., dlvd lb. .48¾ - —
Other consumers or service men, cyls. dlvd lb .67¾ —
Methyl chloroform (see 1,1,1-Trichloroethane).
Methyl cinnamate, cns. lb 1.55 1.80
Methyl ethyl ketone, dms., c.l., dlvd lb. .15 - —
dms., t.c.l., dlvd lb. .16½ - —
tanks, dlvd lb. .12½ - —
2-Methyl-5-ethyl pyridine, dms., c.l., works lb. .45 - —
dms., t.c.l., works lb .45¼ - —
tanks, works lb. .43 - —
Methyl formate, refd., dms lb. .35 - .40
Tech., non-ret. dms., any quantity works lb. .10 - —
tanks, works lb. .07 - —
a-D Methyl glucoside, tech., 100-lb. multiwall paper bgs., c.l., works lb. .21 - —
100-lb multiwall paper bgs., t.l., min. 23,000 lbs., works lb. .21½ - —
100-lb multiwall paper bgs., t.t.l., works lb. .23 - —
Methyl heptin carbonate, bots. oz 28.00 - 31.00
Methyl p-hydroxybenzoate, fib dms. lb 1.90 2.00
Methyl ionone, standard, cns. dms. lb 3.40 3.85
Methyl isobutyl carbinol (see Methyl amyl alcohol).
Methyl isobutyl ketone, dms., c.l., dlvd lb. .17 - —
dms., t.c.l., dlvd. lb. .18½ - —
tanks, dlvd lb. .14½ - —
Methyl methacryiate, dms., c.l., t.l., frt equald with Belle, W. Va lb. .31 - —
dms., smaller lots, same basis lb. .31½ - —
tanks, same basis lb. .29 - —
Methyl naphthyl ketone, cryst., cns lb 2.45 4.30
Methyl parahydroxybenzoate (see Methyl p-Hydroxybenzoate).
Methyl parathion, tech. 80% dms., frt alld E lb. .84 - —
Methyl parathion prices 2c. per lb. higher in West
Methyl roseaniline chloride, NF., 5-lb fib dms. lb 6.90 - —
Methyl salicylate, dms. t.l., frt. alld lb. 60¼ - —
dms., t.c.l. same basis lb. 62½ .67½
Methyl testosterone, USP, 100-gram bots gram No Prices.
2-Methyl-5-vinyl pyridine, 40-dm. lots or more, f.o.b. works lb. 1.30 - —
5-39-dm. lots, same basis lb. 1.35 - —
tanks, same basis lb. 1.25 - —
Methyl violet toner, molybdated, PMA, bbls., dlvd. E of Rockies lb 2.80 - —
Tungstated, PTMA, bbls., same basis lb 4.35 - —
Methyl violet prices 1c higher W. of Rockies
Methylene blue, fib. dms., 100-lb. lots, frt adjusted lb 3.25 - —
Methylene chloride, tech., straight or assorted, dms., c.l., or t.l. dlvd lb. .13½ - —
dms., t.c.l., t.t.l. dlvd lb. .15¾ - —
tanks, 4,000-gal. min., dlvd. lb. .12¼ - —
tanktrucks, 1,000-gal. min., dlvd. lb. .13¼ - —
b-Methylnaphthalene, 32°C., m.p., dms. works lb .90 - —
Methylpentanediol (see Hexylene glycol).
Methylphenylpyrazolone (see 1-phenyl-3-methylpyrazolone-5).
Methylthionine chloride (see Methylene blue).
Mica, dry-grd., paint, plastic, 100 mesh, bgs. c.l., works lb. .04 - —
roofing, 20 to 80 mesh works lb. .03 - —
Mica, wet-grd., biotite bgs. c.l., works, frt alld E lb. .06½ - —
bgs. t.c.l. ex-whse lb. .07¼ - —
paint or lacq., bgs., c.l., 325 mesh works frt alld E. lb. .08¼ - —
bgs. t.c.l., ex-whse. or freight alld E lb. .09 - —
rubber bgs., c.l., works, frt. alld. E lb. .06 - —
bgs. t.c.l., ex-whse or frt. alld. E lb. .08¾ —
wallpaper bgs., c.l., works, frt. alld. E lb. .08¾ - —
bgs., ex-whse. or frt. alld. E lb. .09 - —
white, 5-10 microns, bgs., c.l., works, frt. alld. E lb. .08¼ - —
Mica, wet-grd. W. of Miss. ½c. higher; W. of Rockies 1c. higher.
Microcrystalline wax, petroleum, coating grades, tankcars, works lb. .10 - .11
laminating grades, tankcars, works lb. .11 - .12
Mineral black, bgs., works lb. .0160 - .0673
Mineral oil, white, tech., 50-65 vis., non-ret. dms., c.l., f.o.b. refy gal. .65 - —
50-65 vis., non-ret. dms., t.c.l., basis gal. .70 - —
tankcars, refy. gal. .49 - —
65-75 vis., non-ret. dms., c.l., same basis gal. .65 - —
non-ret. dms., t.c.l., same basis gal. .70 - —
tankcars, refy. gal. .49 - —
NF, 80-90 vis., non-ret. dms., c.l., same basis gal. .66 - —
non-ret. dms., t.c.l., same basis gal. .71 - —
tankcars, refy. gal. .50 - —
NF, 135-138 vis., non-ret. dms., c.l., same basis gal. .72 - —
non-ret. dms., t.c.l., same basis gal. .77 - —
tankcars, refy. gal. .56 - —
NF, 145-155 vis., non-ret. dms., c.l., same basis gal. .78 - —
non-ret. dms., t.c.l., same basis gal. .83 - —
tankcars, refy. gal. .62 - —
USP, 180-190 vis., non-ret. dms., c.l., same basis gal. .80½ - —
non-ret. dms., t.c.l., same basis gal. .85½ - —
tankcars, refy. gal. .64½ - —
USP, 200-210 vis., non-ret. dms., c.l., f.o.b. refy. gal. .82½ - —
non-ret. dms., t.c.l. gal. .87½ - —
tankcars, refy. gal. .66½ - —
USP, 340-350 vis., non-ret. dms., c.l., f.o.b. refy gal. .87½ - —
non-ret. dms., t.c.l. gal. .92½ - —
tankcars, refy gal. .71½ - —
(for f.o.b. N. Y. add 2c. for tankcars, 2c. for c.l. and 3c. for t.c.l. non-ret. dms.)
Mineral orange, American, bbls., c.l., works lb. .1550 - —
bbls., c.l., same basis lb. .1650 - —
Mineral spirits, petroleum, odorless, tankcars, New Jersey gal. .29 - —
New York gal. .305 - —
Houston, Texas gal. .25 - —
regular, tankcars, New Jersey and New York gal. .18 - —
Group 3 gal. .12875 - —
Houston, Texas gal. .145 - —
Mink oil, dms lb. 2.75 - —
Mirbane oil (see Nitrobenzene)
MNPT maroon toner, bgs., c.l., works lb. 6.30 - —
Molasses, blackstrap, feed grade, tanks, New Orleans gal. .08¼ - .08¾
tanks, New York gal. .13½ - —
Molybdated orange, bbls. lb. .49 - —
Molybdenum metal, powd., 80 or 200 mesh, ctns., works kilo 7.84 - —
325 mesh, ctns., works kilo 9.13 - —
Molybdenum trioxide purif., dms., works lb 1.15 - —
Tech. chemical, dms. works, basis Mo. content lb 1.48 - —
Tech., metallurgical, dms., works, basis Mo. content lb. 1.47 - —
Molybdic acid, 85%, dms. works lb. 1.05 - 1.15
Monoallylamine, dms., c.l., dlvd lb. .965 - —
dms., c.l., dlvd. lb. .995 - —
tanks, dlvd. lb. .96 - —
Mononutylamine, dms., c.l., dlvd E. of Rockies lb. .57½ - —
dms., t.c.l., same basis lb. .59 - —
tanks, same basis lb. .55 - —
Mono-tert-butyl-m-cresol, dms., c.l., works lb. .55 - —
dms., t.c.l., works lb. .56 - —
tanks, works lb. .54 - —
Monochloracetic acid, purif. (see Chloroacetic acid mono)
Monochlorobenzene, dms., c.l., frt. alld or dlvd E lb. .10½ - —
dms., t.c.l. same basis lb. .11½ - —
tanl s, same basis lb. .08¾ - —
Monoethanolamine, dms. c.l. dlvd. E lb. .27½ - —
dms., t.c.l., same basis lb. .29 - —
tanks, same basis lb. .25 - —
Monoethylalpnanaphthylamine (see N-Ethyl-a-naphthylamine).
Monoethylamine, 70% aqueous, solution, dms., c.l., dlvd. E, 100% basis lb. .38½ - —
dms., t.c.l. dlvd. E 100% basis, lb. .40 - —
tanks, dlvd. E., 100% basis lb. .35 - —
Monoethylaniline (see N-Ethylaniline).
Monoethylorthotoluidine (see N-Ethyl-o-toluidine)
Monoisopropanolamine, dms., c.l., dlvd E lb. .27½ - —
dms., t.c.l. same basis lb. .29 - —
tanks, same basis lb. .25 - —
Monoisopropylamine, anhyd., dms., c.l. dlvd lb. .33½ - —
dms., t.c.l. same basis lb. .35 - —
tanks, same basis lb. .31 - —
Monomethylamine, anhyd., cyls., t.c.l. frt equald., 100% basis lb. .30 - —
tanks, 100% basis lb. .26 - —
30-35% soln., dms., c.l., frt. equald., 100% basis lb. .36 - —
dms., t.c.l., frt. equald., 100% basis lb. .36½ - —
tanks, frt. equald., 100% basis, lb. .26 - —
40% soln., dms., frt. equald., 100% basis lb. .33 - —
dms., t.c.l. frt equald. 100% basis lb. .33½ - —
tanks, frt. equald, 100% basis lb. .26 - —
Monopentaerythritol, tech., bgs., c.l., dlvd. E lb. .31 - —
bgs., t.c.l., dlvd. E lb. .32 - —
Monopotassium glutamate, dms., 1,000-lb. lots, frt. alld lb. 3.05 - —
dms, 100-lb lots, same basis lb. 3.25 - —
Monosodium glutamate, dms., 100 lbs., dlvd lb. 1.00 - 1.15
Monosodium phosphate (see sodium phosphate, monobasic).
Montan wax, Calif., refd., bgs lb. .27 - .28
Imp., crude, Bohemian, bgs. lb. .22 - .24
German, bgs lb. .26 - .27
Morphine, cns., 100-oz., f.o.b. works, oz. 12.35 - —
Morphine hydrobromide, cns., 100-oz., f.o.b. works oz. 9.90 - —
Morphine hydrochloride, NF, cns., 100-oz., f.o.b. works oz. 9.90 - —
Morphine sulfate, USP, cns., 100-oz., f.o.b. works oz. 9.90 - —
Morpholine, dms., c.l., dlvd. E lb. .55¼ - —
dms., t.c.l., dlvd. E. lb. .56¼ - —
tanks, dlvd. E. lb. .52¾ - —
Muriatic acid (see Hydrochloric acid).
Musk, syn., ambrette, fib. dms., 100-lb. lots lb. 4.40 - 4.90
cns., 25-lb lots lb. 4.50 - 5.00
Ketone, fib. dms., 100-lb. lots lb 4.60 - 5.10
cns. 25-lb lots lb 4.70 - 5.20
Xylol, fib. dms., 100-lb. lots lb. 1.26 - —
cns., 25-lb. lots lb. 1.40 - —

ECO ENGINEERING NEWS

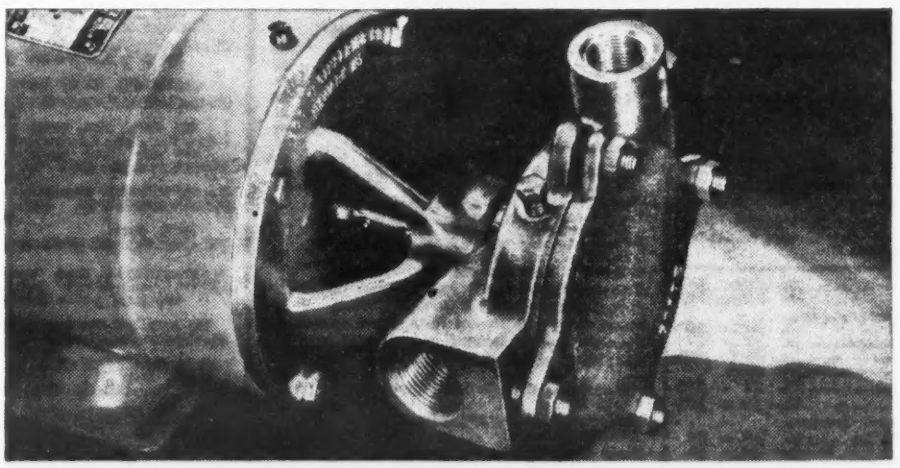
the big name in small pumps for the process industries



ECO GEARCHEM PUMPS



ECO ALL-CHEM PUMPS



ECO CENTRI-CHEM PUMPS

THREE BASIC DESIGNS
Serve Most Small Chemical Pump Needs

•

GEAR: If you require self-priming and intermittent or sustained operation with constant flow metering and reproducible accuracy within plus or minus 1 percent, or maintenance of vacuum in the micron range—handling all commercial chemicals, acids, oxidants, alkalies, aromatics, solvents—select the Eco GEARCHEM Pump. For temperatures up to 400° F and viscosities to 10,000 SSU. Capacities to 10 gpm. Pressures to 100 psi.

ROTARY: If you want linear, non-segmented, non-foaming flows, ideal for shear-sensitive emulsions and safe for auto-detonating fluids—select the self-priming Eco ALL-CHEM Rotary displacement pump with twin opposed oscillating impellers. Designed for severe corrosive service. For reduced viscosities and temperatures to 250° F. Capacities to 10 gpm. Pressures to 100 psi. Suitable for metering in conjunction with Rotometers.

CENTRIFUGAL: If you want a widely applicable, corrosive-resistant centrifugal pump handling most chemicals, including slurries with particle size up to 1/16 of an inch, as well as troublesome sticky fluids—select the Eco CENTRI-CHEM Pump. This pump was designed to meet the standardization programs of major, multi-plant chemical companies. Capacities to 40 gpm. Heads to 57 feet.

•

GREAT VERSATILITY

The widest variety of metals and non-metallics for every corrosion and contamination problem are utilized in Eco Pumps. These include the stainless steels, Stellite, Hastelloy* B and C, monel, nickel, zirconium and titanium; Teflon†, phenolic plastics, Hypalon, Nylon, ceramic, carbon, etc.

Mass Produced and Stocked for Immediate Delivery

Eco Pumps are *not* "custom built" with attendant slow delivery and high cost.

They are stock pumps, produced in volume on automatic "program" machine tools where multiple operations are performed to reduce needless labor and handling. This results in lower prices, precision uniformity and complete interchangeability of parts to meet customer requirements and to facilitate field servicing.

Ask for literature on the complete Eco pump line.

*Union Carbide Trademark. †du Pont Trademark.

ECO ENGINEERING COMPANY · 12 New York Avenue · NEWARK 1, N.J.

Mustard seed, Danish yellow, bags, lb. .11½- —
Montana, yellow, bgs lb. .10½- —
Oriental, bgs lb. .08 —
Mustard oil, syn, bots. lb 1.60 1.85
Myristic acid, bgs lb. .31 - .34
tanks .30½- .32
Myrrh gum, cs. lb. .65 - .75

N

Naphtha, high solvency (see Solvent naphtha, petroleum)
Naphtha, petroleum, cleaner's (see Cleaner's naphtha)
Naphtha, VM&P, petroleum, tankcars, New Jersey and New York gal. .19 - —
Group 3 gal. .13875- —
Houston, Texas gal. .155 —
Naphthalene, crude, dom., 78°, tanks, frt. equald lb. .05 - .06
imp., 78°, bgs, large lots lb. .09½ Nom.
Refd., indust., chipped, crushed, bgs, frt equeld lb. 12½
tanks, same basis lb. .09¾- .10¾
Refd. indust., balls, flakes, wholesalers, jobbers, bbls., c.l., same basis lb. .15½- —
cs. 50 lbs. c.l. same basis, lb. .15¾- —
1-lb pkgs. c.l. same basis, lb 18½- —
a-Naphthol, dms., frt. alld. lb 1.00 - —
b-Naphthol, tech. flake bbls. c.l. works lb. .34 - —
bbls., l.c.l., works lb. .36 - —
Naphthol, ITR red toner, bbls, works lb. 5.00 - —
1-Naphthol-3,6-disulfonic 8-amino acid (see H acid)
1-Naphthol-4 sulfonic acid (see Nevile and Winther's acid)
1-Naphthol-5-sulfonic acid (see L acid).
1-Naphthol-5-sulfonic 8-amino acid (see S acid)
2-Naphthol-6,8-disulfonic acid (see Gamma acid)
Naphthol sulfonic mixed acid (see Cleve's acid)
a-Naphthylamine, dms, frt. alld lb. .50 - —
b-Naphthylamine, tech, flake, bbls, works lb 1.60 - —
1-Naphthylamine-5-sulfonic acid (see Laurent's acid)
2-Naphthylamine-4,8-disulfonic acid (see Cassella acid).
2-Naphthylamine-1-sulfonic acid (see Tobias acid)
2-Naphthylamine-6-sulfonic acid (see Broenner's acid)
2-Naphthylamine-7-sulfonic acid (see F acid)
Naringin, fib dms lb 8.50
Neatsfoot oil, 15° cold test, dms lb. .29 Nom.
20° cold test, dms lb. .28 Nom.
30° cold test, dms lb. .27 Nom.
Neocinchophen USP dms., frt, adjusted lb 7.00 8.00
Neomycin sulfate, fib dms, 1-kilo basis activity gram .25 —
fib dms, 100-999-gram lots, basis activity gram .30 —
Tech., fib. dms gram. .13½- —
Neopentylglycol, dms, c.l., dlvd lb. .32 - —
dms., l.c.l., same basis lb. .33 - —
Neroli oil, NF, French, bots. lb 425.00 -575.00
Tunisian, bots. lb 400.00
Nerolin, cns. lb 2.45 2.85
Neville and Winther's acid, dms., frt. alld lb 1.30 —
Niacinamide (see Nicotinamide).
Nickel acetate, bbls, dlvd lb. .68½ 75½
Nickel carbonate, bbls, dlvd lb. 78¼ 85¼
Nickel chloride, bbls, dlvd lb. .37 .45
Nickel formate, bbls, ton lots, frt. alld lb. .72 .73
Nickel metal, electro cathodes, cs., works lb. .74 —
Nickel nitrate, dms., frt. alld lb. .31½- .33½
Nickel oxide, black, bbls lb. 85 —
Green, bbls lb. 84 —
Nickel sulfate, bgs, c.l. dlvd lb. .28 —
bgs, l.c.l. dlvd lb. 28½- .36
Nicotinamide, USP, 50-kilo dm, frt adjusted kilo 8.00 - —
Nicotinamide hydrochloride, dms, frt. adjusted kilo 8.00 - —
Nicotine sulfate, 40% dealers, 90-lb dms, frt alld lb 1.20 - —
40% manufacturers, 500-lb dms, frt. alld lb 1.05 - —
Nicotinic amide USP (see Nicotinamide)
Niger seed, bgs lb 10¼- —
N-Methamide, cbys lb 5.00 —
Nitric acid, 36° Be., cbys., c.l., works E 100 lbs 5.75 —
cbys, l.c.l, works E 100 lbs 6.05 6.85
38° Be., cbys., c.l., works E, 100 lbs 6.25 —
cbys., l.c.l., works E, 100 lbs 6.55 7.35
40° Be., cbys, c.l., works, E 100 lbs 6.75 —
cbys, l.c.l., works, E 100 lbs 7.05 7.85
42° Be., cbys., c.l., works, E, 100 lbs. 7.25 - —
cbys, l.c.l, works, E, 100 lbs 7.55 8.35
58.5 to 68%, HNO_3, tanks, works, 100% basis 100 lbs 3.90 - —
94½ to 95½% HNO_3, tanks, works, 100% basis 100 lbs 4.90 - —
CP, NF, consumer, cbys., extra, c.l., works lb. .18½- —
cbys, extra, l.c.l., works lb. .20 —
5-pint bots, extra, cs., c.l., same basis lb. .22½- —
5-pint bots, extra, cs., l.c.l., same basis lb. .24 .25
4-Nitro-2-aminophenol, tech, paste, dms., frt. alld lb. .99 - —
m-Nitroaniline, crvst, dms, frt. alld lb 1.15 - —
Paste, dms, frt. alld, 100% basis lb 1.10 - —
o-Nitroaniline, flaked, dms, t.l, frt. alld lb .49 - —
dms, t.l.l, frt alld lb. .51 - —
o-Nitroaniline, orange, toner, kegs, lb 1.35 - —
p-Nitroaniline, dms, frt alld, lb. .445 - —
o-Nitroanisole, tech, tanks, frt alld, lb. .36 - —
p-Nitroanisole, tech, solid, lms., frt alld lb. .72 - —
Nitrobenzene, dbl dist., dms, c.l., frt alld lb. .13 - —
dms, l.c.l, frt. alld lb. 14 - —
tanks, frt. alld lb. .11 - —
p-Nitrobenzoic acid, dms., c.l., works lb 63 - —
dms, l.c.l., works lb 64 - —
Nitrocellulose, ester-soluble, 30-35 cps., ¼, ½ ¾, 5-6, 15-20, 30-40 60-80, 125-175 seconds, bbls, c.l. works lb. .37½- —
bbls., l.c.l., same basis lb. .33½- .40½
18-20, cps., bbls, c.l., same basis lb. .39½- —
bbls, l.c.l. same basis lb. .40½ 42½
250-400, 600-1,000 seconds, bbls., l.c.l. same basis lb. .43 46
Spirit soluble, 30-35 cps., ¼, ½ seconds, bbls, c.l., same basis lb. .43 - —
bbls, l.c.l. same basis lb. 44 46
5-6 cps., 40-60 seconds, bbls., c.l., same basis lb. .42 - —
bbls, l.c.l. same basis lb 43 45
Denatured alcohol used in the manufacture of nitrocellulose is charged extra. Drums extra but returnable
o-Nitrochlorobenzene, dms, c.l., frt. alld lb. .15 - —
dms., l.c.l. same basis lb .16 - —
tanks, same basis lb 13 - —
p-Nitrochlorobenzene, dms. lb 26 .27
2-Nitro-p-cresol, tech, dms., dlvd, lb .88 —
Nitroethane, dms., c.l., dlvd E lb .25 —
dms., l.c.l. dlvd E lb .26½- —
tanks, dlvd E lb .22½- —
Nitroethane prices West of Rockies are 1c higher
Nitrogen solutions, tanks, frt. equald., N unit. 1.28 - —
Nitrogen tetroxide, indust., tankcars, f.o.b. Hopewell, Va lb. .065 - —
Clys., t.l., min. 5 tons, same basis lb. .07½- —
Cyls., l.c.l., l.t.l., same basis, lb. .15 - —
Nitrogenous process tankage, bulk works unit-ton. 4.50 - 5.00
Nitrogenous sewage sludge, bulk f.o.b. Chicago, works, unit-ton. 3.50 - .50
Nitromethane, dms, t.l. dlvd E lb .25 —
dms, l.t.l. dlvd E lb .26½- —
Nitromethane prices West of Rockies are 1c higher
a-Nitronaphthalene, bbls, frt. alld lb. .31 - —
o-Nitrophenol, dms, works, frt. equald lb. .94 - —
p-Nitrophenol, dms, c.l., frt. alld, lb. .45 - —
dms, l.c.l., frt. alld lb .47 - —
1-Nitropropane, dms, c.l., frt. alld, E of Rockies lb. .23½- —
dms, l.c.l. same basis lb. .25 - —
tanks, same basis lb. .21 - —
2-Nitropropane, dms, c.l., frt. alld, E of Rockies lb .18½- —
dms, l.c.l. same basis lb .20 - —
tanks, same basis lb. .16 - —
Nitropropane prices West of Rockies are 1c per lb higher
m-Nitrotoluene, tech, dms, frt alld lb. .50 - —
o-Nitrotoluene, dms, c.l, frt alld, lb .15 - —
dms., l.c.l, frt alld. lb .16 - —
tanks, frt alld lb 13 - —
p-Nitrotoluene, tech., cast, dms., c.l., works lb. .27½- —
dms, l.c.l. works lb .28 - —
flake, dms, c.l., t.l., works lb .27½- —
dms., l.c.l., works lb 28 - —
m-Nitro-p-toluidine, dms lb 1.25 - —
Nonylphenol, dms, c.l. frt. alld, lb .22 - —
tanks, frt alld lb .19½- —
Nonylphenol prices on shipments to Western States are 2c higher.
Nutmegs, East Indian, whole, bgs, lb 1.36 - —
West Indian, bgs lb 1.45 - —
Nutmeg oil, USP, dist., East Indian, cns lb. 9.00 -12.00
West Indian, cns. lb. 9.00 -12.00
Nux vomica, bbls lb .20 —
Powd., bbls., bxs lb .20 .22

O

Ocher (see Iron oxide, yellow, nat.).
Ocotea cymbarum oil, dms lb. .48 - .55
Octane, indust, tanks, Bayonne, N.J. gal. .20 —
Borger, Tex gal. .15¾- —
1-Octanol, tech, dms, c.l., dlvd., Zone 1 lb. .43½- —
dms., l.c.l., dlvd, Zone 1 lb. .45½- —
tanks, dlvd, Zone 1 lb. .41 - —
Octyl alcohol, perfumers' grade, bots lb 1.60 3.25
Octyl alcohol, tech, (see 1-Octanol, tech)
tert-Octylamine, dms., c.l., t.l., f.o.b. works lb. .54½- —
dms., l.c.l., same basis lb. .55 - —
Octyl phenol, bgs, c.l., works lb. .22 - —
bgs, l.c.l., works lb. .22½- —
tanks, work lb. .21 - —
Octyl phenol in dms, 11c higher

O'LS
Oil quotations are listed individually. For example, prices on Oil, coconut, may be found in the C's under Coconut oil.

Oiticica oil, liq., dms. lb. .16¼- .16¾
tanks lb. .14¼- .14½
Oleic acid, dbl.-dist. (white), dms. lb. .17½- .20
tanks lb. .15 - —
S. d., dms lb. .16¼- .18¾
tanks lb. .13¾- —
Oleo oil, extra, dms lb. .14 - .14¼
Oleostearine, dms. lb. .13 - .13¼
Oleum (see Sulfuric acid, fuming)
Olibanum gum, siftings, cs. lb. .15 - .20
Tears, cs lb .22 .30
Olive oil, edible, dms, spot, duty-paid gal. 2.40 - 2.50
Olive oil, crude, works ton 12.00 —
20 mesh, works ton 15.00 - —
100 mesh, works ton 20.00 - —
Opium gum, USP, cns., 25-lbs., f.o.b. works oz. 19.20 - —
gran., cns., 50 lbs., same basis, oz. 21.65 - —
powd., cns., 50 lbs., same basis, oz. 21.65 - —
Orange oil, expressed, USP, Brazilian, cns, dms lb. No stocks.
California, cn., dms lb. .70 - .90
Florida, cns., dms. lb. .45 - .50
Messina, cns lb 3.25 5.00
West Indian bitter, cns, dms lb 2.50 3.25
Sweet, dist., cns., dms lb. .60 - —
Orange peel, bitter, Haitian, bls. lb. .18 - .20
Sweet lb. .28 - .30
Origanum oil, Spanish, cns lb. 1.80 2.30

ORANGE PIGMENTS
Orange pigment quotations are listed individually. For example, prices on Orange, chrome, may be found in the C's under Chrome orange.

Orris root, Florentine, bls. lb. .55 - —
powd, bbls, bxs lb .65 - —
Verona, bls. lb .35 - —
powd, bbls, bxs lb .45 - —
Orthoanisidine (see o-Anisidine).
Orthochlorobenzaldehyde (see o-Chlorobenzaldehyde)
Orthochloroaniline (see o-Chloroaniline).
Orthochlorobenzoic acid (see o-Chlorobenzoic acid)
Orthochloroparanitroaniline (see 2-Chloro-4-nitroaniline)
Orthochlorophenol (see o-Chlorophenol).
Orthocresol (see o-Cresol).
Orthocresotinic acid (see 2,3-Creosotic acid).
Orthodichlorobenzene (see o-Dichlorobenzene).
Orthonitroaniline (see o-Nitroaniline)
Orthonitrochlorobenzene (see o-Nitrochlorobenzene)
Orthonitroparachlorophenol (see 2-Nitro-4-Chlorophenol)
Orthonitrophenol (see o-Nitrophenol).
Orthonitrotoluene (see o-Nitrotoluene).
Orthophenetidine (see o-Phenetidine).
Orthophenylphenol (see o-Phenyl phenol).
Ortho-tertiary amylphenol (see o-tert-Amylphenol)
Orthotolidine (see o-Tolidine base).
Orthotoluidine (see o-Toluidine)
Ouabain, USP bots., gram 3.00 4.00
Ouricury wax, crude, bgs lb. .59 - .60
Refd., pure, bgs lb. .66 - .67
Oxalic acid, bgs, dms, c.l., works, lb. .18 - .18½
bgs, dms, 10,000-lb lots, works, lb. .18¼- .18¾
bgs, dms, smaller lots, works, lb. 19¼- .19¾
b-Oxynaphthoic acid, pigment manufacture, dms., frt. alld. lb. .912 - —
Dyestuff manufacture, dms., same basis lb. 1.03 - 1.14
Oxyquinolin sulfate, cns. 100-lb lots, works, lb 4.75 5.00
cns., smaller lots, works lb. 4.92 5.17

P

Palm oil, clarif., dms. lb. .14 - .15
tanks lb. .11¾- —
Palm oil acid, dist., dms. lb. 15¾ .19¼
tanks lb 13¾ 14¼
Palmarosa oil, cns lb. 4.45 - 6.00
Papain, powd., bots lb. 5.50 -10.00
Papaverine hydrochloride, nat. or syn. USP, cns., 25-oz to 100-oz lots oz 5.00 —
cns., smaller lots oz 5.05 5.20
Papaverine sulfate, nat. or syn., USP, cns., oz 7.10 7.35
Paprika, Bulgarian, bgs lb. .34 - .35
Hungarian, bgs. lb. .32 - —
Spanish, bgs. lb. .50 - —
Yugoslavian, bgs. lb .34 —
Para-aminobenzoic acid (see p-Aminobenzoic acid)
Parachlorobenzoic acid (see p-Chlorobenzoic acid).
Paramethylphenyleinchonic acid (see Neocinchophen)
Paranitrobenzoic acid (see p-Nitrobenzoic acid)
Paratoluidinemetasulfonic acid (see p-Toluidine m-sulfonic acid)
Para-aminophenol (see p-Aminophenol).
Parachloro-orthonitroaniline (see 4-Chloro-2-nitroaniline)
Para-anisidin (see p-Anisidine)
Parachloraniline (see p-Chloraniline).
Parachlorobenzaldehyde (see p-Chlorobenzaldehyde)
Parachlorophenol (see p-Chlorophenol).
Paracresol (see p-Cresol)
Paradibromobenzene (see p-Dibromobenzene).
Paradichlorobenzene (see p-Dichlorobenzene)
Para toner, red, bbls. lb. 1.21 - —
Chlorinated, kgs. lb. 1.36 - —
Paraffin, crude, scale, white, 123°-127°F, ASTM, tanks, refy, lb. .0655- —
Paraffin, fully refd., 122°-124°F, ASTM., tanks, refy lb. .0765- —
125°-127°F, ASTM, tanks, refy, lb. .0765- —
130°-132°F, ASTM, tanks, refy, lb. .0765- —
132°-134°F., ASTM, tanks, refy, lb. .0765- —
135°-137°F., ASTM, tanks, refy lb. .0765- —
AMP temperatures are an arbitrary 3°F higher than ASTM
Paraffin oil, pale, 100-110 vis., at 100°F., tanks, east coast refy gal. .14 - —
Paraffin wax (see Paraffin)
Paraformaldehyde 91% flake, bgs., c.l., frt. alld lb. .10 - —
bgs., l.c.l., frt. alld lb. .12 - .13
91%, powd., bgs., c.l. ex whse. lb. .1715- —
bgs., l.c.l., ex whse lb. .1865- —
USP-X, fib dms., c.l. lb. .19 - —
fib dms., 1,000-lb. lots lb. .20 - —
fib dms., smaller lots lb. .21½- —
Paraldehyde, tech., 98%, 55-gal, dms., t.l., dlvd lb. .14 - —
55-gal. dms., l.c.l., dlvd lb. .15 - —
tanks, dlvd lb. .11½- —
Paranitroaniline (see p-Nitroaniline).
Paranitrochlorobenzene (see p-Nitrochlorobenzene)
Paranitrotoluene (see p-Nitrotoluene.
Paranitrophenol (see p-Nitrophenol).
Paraphenetidine (see p-Phenetidine).
Paraphenylenediamine (see p-Phenylenediamine)
Paraphenylphenol (see p-Phenylphenol).
Para-tertiary-amylphenol (see p-tert-Amylphenol)
Para-tertiary butylphenol (see p-tert-Butylphenol)
Parathion, ethyl, dms. frt. alld. lb. .84 - —
Parathion prices 2c per lb higher in West.
Paratoluenesulfonamide (see p-Toluenesulfonamide)
Paris green, dealers, 100 lb. dms., frt. alld lb. .45 - —
Passion flower herb, bls. lb. .45 - .50
Patchouli oil, imp., cns. lb. 5.50 - 6.50
Peach kernel oil, USP (see Apricot kernel oil)
Peacock blue, fugitive, 100% color strength, 250-lb. bbls., dlvd E of Rockies lb. 1.00 - —
Peacock blue price 1c higher W of Rockies
Peanut meal, 45% old process, bgs., f.o.b., mills ton 53.00 -55.00
Peanut oil, crude, tanks, f.o.b. mills lb. .16 - —
Refd., dms. lb. .21¼- .21½
tanks lb. .19¼- —
Pectin, dom, NF, citrus, powd, bbls lb 2.05 2.06
Dom., tech., powd., 150 jelly grade, bbls lb. 1.28 - —
Imp., Danish, bbls, ex whse lb. 1.28 - —
Pelargonic acid, dms., c.l., dlvd lb. .25 - —
ton lots, same basis lb. .27½- —
tanks, same basis lb. .23½- —
Penicillin potassium cryst., bulk, 1,000,000 units. .021 - —
Penicillin procaine cryst., bulk, 1,000,000 units. .023 - —
Pennyroyal oil USP, imported, cns. lb. 2.25 - 3.10
Pentachlorophenol, bgs., c.l., t.l., works, frt equald lb. .21 - —
bgs., l.c.l., same basis lb. 22½- .29
Pentachlorophenol in dms, 1c higher.
Pentaerythritol, tech., bgs., c.l., dlvd lb. .31 - —
bgs., l.c.l., dlvd lb. .32 - —
Pentaerythritol, di-and tri-isomers (see Dipentaerythritol and Tripentaerythritol)
Pentane, indust., tanks, Tex. refy. gal. .14 - —
Pentobarbital, dms., 100 lbs. or more lb 6.00 - —
Pepper, black, Malabar, bgs. lb. .57½- —
Lampong, bgs. lb. .57½- —
Red, Funtuas, bgs lb. .32 - —
Japanese, Hontoka, bgs lb. .37½- —
Santaka, bgs. lb. 31½- —
Sudanese, bgs. lb. .36 - —
White, Muntok, bgs lb. .92 - —
Peppermint leaves, dom, USP, bls., dms lb. 70 - .75
Imp., USP., bls lb. 85 —
Peppermint oil, nat., dms. lb. 4.00 - 4.60
Redist., USP, dms. lb. 4.25 - 5.25
Perchloroethylene, dms., c.l. or t.l., dlvd lb. .13½- —
dms., t.c.l., dlvd lb. .15¼- —
tanks, dlvd. lb. .11¾- —
tanktruck, 1,000 gal min, dlvd, lb. .12¼- —
Peri acid, dry, bbls, frt. alld lb 1.60 —
Paste, bbls, frt. alld lb 1.55 —
Peru balsam, dms. lb. 1.10 - 1.50
Persic oil USP (see Apricot kernel oil).
Petitgrain oil, South American, cns. dms lb. 2.50 - 3.25
Petrolatum, cream, dms, c.l. refy lb. .08125- —
dms., l.c.l., dlvd. lb. .10125-.11375
tanks, refy lb. .05875- —
Extra amber, dms., c.l., refy. lb. .07125 —
dms, l.c.l., dlvd lb 09125-.10375
tanks, refy lb. 04875- —
Petrolatum, lily white, dms., c.l., refy. lb. .08625- —
dms, l.c.l., dlvd lb. 10625- 12
tanks, refy lb 06735- —
USP, snow white, dms., c.l., refy. lb. .09125 - —
dms., l.c.l., dlvd lb. .11125- .125
tanks, refy lb 06875- —
USP, soft yellow, dms., c.l., refy. lb. .07125- —
dms., l.c.l., dlvd lb. .095 .10375
tanks, refy lb. .04875- —
Petroleum pitch (see Asphalt, petroleum)

PETROLEUM PRODUCTS
Petroleum product quotations are listed individually. For example, prices on Petroleum, mineral spirits, may be found in the M's under Mineral spirits, petroleum.

Petroleum sulfonate, oil soluble, 60-62% sulfonic content, non-ret, dms, c.l., works lb. .16½- .18¾
non-ret, dms, l.c.l. works lb. .17½- .19
tanks, works lb. .14½- .17
50-55%, sulfuric content, non-ret, dms., c.l., works lb. .16 - —
non-ret, dms, l.c.l. works lb. .17 - —
tanks, works lb. .13 - —
o-Phenetidine, dms, c.l, frt alld, E lb. .91 - —
dms, l.c.l., same basis lb. .93 - —
p-Phenetidine, dms., c.l., frt. alld. lb 1.05 - —
dms, same basis lb 1.08 - —
Phenobarbitol, USP, dms., 100-lbs., frt. alld lb. 3.25 - —
Phenobarbital-Sodium (see sodium phenobarbital)
Phenol, 90-92% (cresol 8-10%) non-ret, dms, frt alld, E of Rockies lb. .16¾- —
non-ret, dms, l.c.l. same basis, lb. .17¾- —
tanks, same basis lb. .14¾- —
82-84% (cresol 16-18%) non-ret, dms., c.l., same basis lb. .16½- —
non ret, dms, l.c.l., same basis, lb. .17½- —
tanks, same basis lb. .14½- —
30° C, or above, tar dist., non-ret, dms., c.l., same basis lb. .18 - —
non-ret, dms, l.c.l., same basis, lb. .19 - —
tanks, same basis lb. .16 - —
USP, syn., dms., c.l., t.l., frt. alld lb. .18½- —
dms., same basis lb. .20½- —
tanks, same basis lb. .16½- —
Phenolphthalein, USP or yellow, 250-lb. dm, 2,000 lbs. frt. alld. lb. 1.30 - —
250-lb. dm., same basis lb. 1.35 - —
Phenothiazine drench, fib dms., t.l., dlvd lb. .44 - —
fib dms, t.t.l., same basis lb. .47 - —
NF, fib. dms., t.l., same basis lb. .43 - —
fib dms, t.t.l. same basis lb. .46 - —
Phenyl acetate, dms, 100-lb. lots, works lb. .50 - —
Phenyl salicylate (see Salol).
Phenylacetaldehyde, soln., 50%, bots lb. 2.35 - —
100%, bots lb. 4.00 - 4.65
Phenylacetic acid, pure, cryst, cns. lb. 1.25 - 1.75
dl-Phenylalanine, dms works lb. 27.00 -37.50
l-Phenyl-3-carbethoxy pyrazolone-5, fib dms 200-lb lots dlvd E lb 3.45 - —
fib dms, smaller lots, dlvd E lb 3.80 - —
N-Phenyldiethanolamine, dms, c.l., dlvd E lb. .41 - —
dms., l.c.l., dlvd E lb. .42½- —
tanks, dlvd E lb. .38½- —
m-Phenylenediamine, dms, frt. alld, lb. 1.10 - —
o-Phenylenediamine, comi., fib. dms., 100 to 1,000 lbs., works lb. 1.70 - 1.80
p-Phenylenediamine, tech., dms., works lb. 1.55 - —
Phenylethanolamine, dms., c.l., works lb. .75½- —
dms, l.c.l., same basis lb. 77 - —
Phenylethyl acetate, bots. lb. 1.25 - 1.40
2-Phenylethyl alcohol, extra, dms. lb. 1.14 - 1.50
Standard, dms. lb. 1.10 - 1.60
b-Phenylethylamine, dms., 20,000 lbs. or more, frt alld lb. 1.50 - —
dms., smaller lots, frt. alld lb. 1.70 - 1.85
Phenylethylphenyl acetate, bots. lb 4.00 - 4.25
Phenylglyconic acid (see Mendelic acid)
Phenylhydrazine, 97%, 450-lb. dms, lb. 1.45 - —
1-Phenyl-3-methyl pyrazolone-5, fib. dms., 250-lb. lots, dlvd E lb 1.80 - —
fib. dms, smaller lots, dlvd E lb 2.10 - —
o-Phenylphenol, dms., l.c.l. works, lb. 48 .50
p-Phenylphenol, bgs, c.l., works lb .38½- —
bgs., t.c.l., works lb. 43 - —

Philippine copal gum, pale, chips, bgs	lb.	.23¼	-	.24
nubs, bgs.	lb.	.33¼	-	.37
seeds, bgs.	lb.	.20		Nom.
sorts, bgs.	lb.	.20	-	.24
Phloroglucinol, comi., fib. dms., works	lb.	6.40	-	—
CP, bots., works	lb.	17.75	-	—
Tech., fib. dms., works	lb.	10.45	-	—
Phloxin red toner (see Eosin red toner).				
Phosgene, ret. cyls., works	lb.	.15½	-	—
Phosphate, defluorinated (see under D).				
Phosphate rock, Curacao, Atlantic ports New Orleans	ton.	48.00	-	—
Phosphate rock, Florida, land pebble, run-of-mine, washed, dried, unground, 66-68%, b.p.l., bulk, c.i. mines.	short-ton.	4.798	-	—
68-70%, b.p.l., bulk, c.l., same basis	short-ton.	5.148	-	—
70-72%, b.p.l., bulk, c.l., same basis	short ton.	5.728	-	—
74-75%, b.p.l., bulk, c.l., same basis	short ton.	6.628	-	—
76-77% b.p.l., c.l., bulk, same basis	short ton.	7.518	-	—
Above Florida prices are based on fuel oil at $2.37 per bbl. and labor at $1.59.				
Phosphoric acid, food grade, 75%, cbys., c.l., works, E., frt. equald	100 lbs.	7.00	-	—
cbys., l.c.l., same basis.	100 lbs.	7.25	-	7.75
tanks, t.w., works	100 lbs.	5.60	-	—
80%, cbys., c.l., frt. equald	100 lbs.	7.85	-	—
cbys., l.c.l., works	100 lbs.	8.10	-	9.35
tanks, t.w., works	100 lbs.	6.00	-	—
NF, 85%, cbys., c.l., works.	100 lbs.	8.50	-	—
cbys., l.c.l., works	100 lbs.	8.75	-	9.00
tanks, t.w., works	100 lbs.	6.65	-	—
Phosphorus, amorph., red, dms., t.l., works	lb.	.55	-	—
dms., smaller lots, works	lb.	.56	-	.57
white (yellow), solid, dms., c.l., works, frt. equald	lb.	.20	-	.20½
dms., l.c.l., works, frt. equald	lb.	.21½	-	—
tanks, works, frt. equald	lb.	.19	-	—
Phosphorus oxychloride, dms., c.l., works	lb.	.14	-	—
dms., l.c.l., works	lb.	.15	-	—
tanks, works	lb.	.12½	-	—
Phosphorus pentasulfide, powd., dms., c.l. works	lb.	.13½	-	—
dms., l.c.l., works	lb.	.14½	-	.15½
Solid, dms., c.l., works	lb.	.11½	-	—
dms., l.c.l., works	lb.	.12½	-	13½
Phosphorus pentoxide, dms., c.l., works	lb.	.1375	-	.1475
dms., l.c.l., works	lb.	.1475	-	.1675
Phosphorus sesquisulfide, dms., cs., c.l., works	lb.	.38	-	—
dms., l.c.l., works	lb.	.39	-	.40
Phosphorus trichloride, dms., c.l., works	lb.	.14	-	—
dms., l.c.l., works	lb.	.15	-	—
tanks, works	lb.	.12½	-	—
Phthalic anhydride bgs. c.l., works, frt. equald	lb.	.17	-	.21
bgs., l.c.l., same basis	lb.	.18	-	.22
tanks, same basis	lb.	.16½	-	.20½
Phthalimide 97-98%, dms., frt. alld	lb.	.63	-	—
Phthalocyanine blue, full strength, bbls. dlvd. E. of Rockies	lb	2.90	-	—
Resinated, bbls., same basis	lb.	2.75	-	—
Water dispersable, bbls., same basis	lb.	1.52	-	—
Phthalocyanine blue prices 1c. higher W. of Rockies.				
Phthalocyanine green toner, bbls., works	lb.	3.35	-	—
Resinated, bbls	lb	3.00	-	—
Water dispersable, bbls	lb.	1.71	-	—
Phthalocyanine green prices 1c. higher W. of Rockies				
Phthalylsulfacetamide, fib. dms., 1,000-lb. lots or more	lb.	5.00	-	—
NF, fib. dms	lb.	5.20	-	—
a-Picoline dms., c.l., works, frt. equald	lb.	.43	-	.43½
dms. l.c.l. works frt. equald	lb.	.44	-	—
tanks, same basis	lb.	.415	-	—
b-Picoline 98% dms., t.l., works.	lb.	1.05	-	—
dms., l.c.l., same basis	lb.	1.15	-	—
tanks, same basis	lb.	.95	-	—
b,g-Picoline, 5°C. dms., c.l., works.	lb.	.32½	-	—
dms. l.c.l. works	lb.	.33	-	—
g-Picoline, dms., f.o.b., works	lb.	1.60	-	—
tanks, t.l. same basis	lb.	1.50	-	—
Picric acid, NF bbls.	lb.	.85	-	—
Tech. bbls	lb.	.44	-	—
Pigment green B, kgs	lb.	1.50	-	—
Pilocarpine hydrochloride, USP., bots.	oz.	5.25	-	—
Pilocarpine nitrate, USP bots. vials.	oz.	5.15	-	—
Pimento, Jamaican, bgs.	lb.	.68	-	—
Mexican, bgs	lb.	.57	-	—
Pimento berry oil, NF dms.	lb.	3.75	-	9.25
Pimento leaf oil, crude, cns	lb.	2.20	-	2.60
Pine oil, dest.-dist. dms., l.c.l. works	lb.	.15	-	—
dms. l.c.l. ex whse New York.	lb.	.173	-	—
Steam-dist., dms., ex whse., New York	lb.	.185	-	—
dms., dlvd.	lb.	.188	-	—
Pineneedle oil, Siberian (see Abies Siberica oil)				
Pinetar, retort, dms., c.l., works	lb.	.0611	-	—
dms., l.c.l., works	lb.	.0684	-	—
dms., c.l., ex whse, New York.	lb.	.0795	-	—
tanks, works	lb.	.0511	-	—
Pinetar oil comi. dms. c.l., works.	lb.	.0611	-	—
dms., l.c.l., works	lb.	.0684	-	—
dms., c.l., ex whse., New York.	lb.	.0795	-	—
tanks, works	lb.	.0511	-	—
NF, rectified, dms., incl., l.c.l., works, South	lb.	.40	-	—
dms. l.c.l. ex whse. New York	lb.	.41½	-	—
Refd., dms., incl., l.c.l., works	lb.	.35	-	—
dms. incl. l.c.l., ex whse New York	lb.	.36½	-	—
Pink root, bls.	lb.	1.75	-	—
Piperazine, anhyd., dms., c.l., , frt. alld	lb.	1.80	-	—
dms., l.c.l., same basis	lb.	1.85	-	—
Piperazine citrate, 36%, dms., 1,000 lbs. or more frt. alld	lb.	1.15	-	—
Piperazine dihydrochloride, 51%, dms. 1,000 lbs or more, frt. alld	lb.	1.23	-	—
Piperazine hexahydrate, 44%, dms., 1,000 lbs. or more, frt. alld	lb.	.86	-	—
dms., 200-900 lbs., frt. alld	lb.	.89	-	—
Piperazine phosphate, 42% dms., 1,000 lbs. or more frt. alld.	lb.	1.06	-	—
Piperidine dist. 98% min., dms., frt. equald	lb.	2.60	-	—
Piperonyl butoxide dms. dlvd E.	lb	4.50		5.05

PITCHES

Pitch quotations are listed individually. For example, prices on Pitch, soybean, may be found in the S's under Soybean pitch.

Plaster of Paris (see Gypsum).				
Platinum metal, works	oz.	81.00	-	85.00
Poppy seed, Turkish, bgs.	lb.	.45		.50
Podophyllum resin, NF, dms.	lb.	12.50	-	—
Poke root, bls.	lb.	.19	-	.22
Polymyxin, bots., bulk, 50 billion units or more	1,000,000 units.	.53	-	—
bulk, bots., 25-50 billion units.	1,000,000 units.	.54	-	—
bulk, bots., 1-25 billion units.	1,000,000 units.	.56	-	—
Polyoxyethylene sorbitan monostearate, dms., 20,000-lb. lots, works	lb.	.42	-	—
dms., 10,000-20,000-lb. lots, works.	lb.	.44	-	—
dms., smaller lots, works	lb.	.47	-	.49
Polyoxyethylene sorbitan tristearate, dms., 20,000-lb. lots, works.	lb.	.42	-	—
dms., 10,000-20,000-lb. lots, works	lb.	.44	-	—
dms., smaller lots, works	lb.	.47	-	.49
Pontianak copal gum, chips, bgs.	lb.	.25	-	—
Nubs, bgs.	lb.	.37	-	.40
Poppy seed, Argentine, bgs.	lb.	No stocks.		
Dutch, bgs.	lb.	.22		—
Danish, bgs.	lb.	.20½		—
Polish, bgs.	lb.	.20		—
Turkish, bgs.	lb.	.17½		—
Potash, caustic, liq., 45% basis, dms., c.l., works	100 lbs.	4.25	-	—
dms., l.c.l., same basis	100 lbs	5.05	-	—
tanks, same basis	100 lbs	3.70	-	—
reg., flake, 88-92%, dms., c.l., same basis	100 lbs.	9.15	-	—
reg., flake, 88-92%, dms., l.c.l., same basis	100 lbs.	10.20	-	—
solid, 88-92%, dms., c.l., works.	100 lbs.	8.70	-	—
dms., l.c.l. works	100 lbs	9.75	-	—
Potassium acetate, NF 200-lb. dm., f.o.b. works E	lb.	.31	-	—
Potassium bicarbonate, USP, gran. dms	lb.	.22	-	—
USP, powd., dms.	lb.	.24	-	—
Potassium bichromate, gran., bgs., c.l., t.l., works	lb.	.18		—
bgs., l.c.l., works	lb.	.18½	-	.19¾
also for delivery during the cur-				
Potassium bitartrate, NF, gran., powd., 100-lb. bgs., c.l., frt. equald	lb.	.37	-	—
100-lb. bgs., 5,000 lbs. 1 shipt., same basis	lb.	.38	-	—
100-lb. bgs., smaller lots, same basis	lb.	.40	-	—
Potassium borohydride, powd., dms., works	lb.	16.00	-	22.00
Pelletized postassium borohydride $1.25 per lb higher in 1,000-lb lots.				
Potassium bromate, dms., 1,000-lb. lots or more, works	lb.	.50	-	—
dms., smaller lots, works	lb.	.52	-	.62
Potassium bromide, USP, gran. bbls., kgs	lb.	.39	-	.40
Potassium carbonate, dom., NF, gran., bbls. dms	lb	.20	-	—
Dom., tech. powd., bbls., dms	lb.	.21	-	.22
Dom., calcinated, bgs., c.l., works, 100 lbs.	100 lbs.	8.50	-	—
bgs., l.c.l., same basis	100 lbs.	9.55	-	—
Dom., hydrated, 83-85%, bgs., c.l., works	100 lbs.	7.10	-	—
bgs. l.c.l. works	100 lbs	8.15	-	—
Potassium chlorate, cryst., dms., c.l., works	lb.	.12¼		—
dms., l.c.l., works	lb	.13½	-	.14½
Powd., dms., c.l., works	lb.	.12¾		—
dms., l.c.l., works	lb	.14		.15
	works lb.	.12¼	-	—
Potassium chlorate, NF, cryst., dms., 2,000 lbs. or more, works	lb.	.16¾	-	—
NF, gran. 25-lb metal dms	lb.	36		—
NF powd. dms., 2,000 lbs or more works	lb.	17¼	-	—
Potassium chloride (indust., 99.9% KCL, bulk c.l works	ton	29.00		—
bgs. c.l. works	ton	33.50		—
99.3% KCL bulk c.l., works	ton	27.00		—
bgs. c.l works	ton	31.50		—
USP, cryst., dms.	lb.	.20	-	.22
USP, gran., dms.	lb	.21		.23
USP, powd., dms.	lb.	.24		.26
Potassium chloride, agricultural (see Potassium muriate)				
Potassium chromate tech., dms., works	lb.	.50		.51
Potassium citrate, NF, gran., 250-lb. dm., f.o.b. works E	lb.	.43	-	—
powd., 250-lb dms. same basis.	lb.	.46	-	—
Potassium cyanide, dms 20,000-lb. lots or more, works	lb.	.42½	-	—
dms., 2,000-19,999 lb lots, works.	lb.	.43	-	—
dms., smaller lots, works	lb.	.44	-	.44½
Potassium dichromate (see Potassium bichromate)				
Potassium ferricyanide, dms., ton lots, works	lb.	.50	-	—
dms., smaller lots, works	lb.	.65	-	—
Potassium ferrocyanide, dms., ton lots	lb.	.24½	-	—
dms., smaller lots	lb.	.29	-	—

MONTROSE
CHEMICAL COMPANY

100 LISTER AVENUE
NEWARK, NEW JERSEY

Dimethyl Isophthalate

Trimethyl Borate — Trimethoxy Boroxine

T.C.P. — Tricresyl Phosphate

Mono Cresyl Diphenyl Phosphate

D.D.T. — Dichloro Diphenyl Trichloroethane

Ethyl Silicate 28% — 40%

D.D.V.P. — Dimethyl Dichloro Vinyl Phosphate
(Minimum 95% Purity)

EXCLUSIVE SALES AGENTS

R. W. GREEFF & CO., INC.
10 ROCKEFELLER PLAZA, NEW YORK 20, N. Y.
1721 TRIBUNE TOWER, CHICAGO, ILLINOIS

Potassium Fluoborate—Red Oil

Potassium fluoborate, fib dms., c.l., works lb. .30 - —
fib, dms., l.c.l., works lb. .31 - —
Potassium fluoride, dms., works lb. .37 - .38
Potassium gluconate, 100-lb. dm., f.o.b works E lb. 1.67 - —
Potassium guaiacol sulfonate, NF, dms lb 2.10 2.30
Potassium hydroxide tech (see Potash caustic).
Potassium hydroxide, USP, pellets, 100-lb dms 1 to 100-dm. lots lb. .33½- .38
Potassium hypophosphite, NF, fib. dms. 1,000-lb lots lb. 1.38 - —
Potassium iodide USP, cryst., gran., or powd., 250-lb dm., f.o.b. works lb. 1.40 - —
Potassium manure salt, 22% K_2O, bulk, c.l. works unit-ton. .17 - .1765
Potassium metabisulfite, gran., dms. lb. .16 - —
Powd., dms. lb. .27 - —
Potassium muriate, standard, bulk, c.l., works unit-ton. .34½- .36½
bagged, 60% minimum K_2O, same basis ton.25.60 -26.80
Gran., bulk, c.l., works unit-ton. .35 - .37
bagged., 60% minimum K_2O, same basis ton.25.90 -27.10

Inside prices apply to material contracted for prior to July 1, 1959.

Outside prices apply to material contracted for after that date but also for delivery during the current month.

Potassium nitrate, NF, cryst., bbls., 20-ton lots 100 lbs.17.00 - —
bbls., smaller lots 100 lbs.18.00 -19.00
NF, gran., bgs., 20-ton lots. 100 lbs. 9.50 —
bgs., smaller lots 100 lbs.11.00 -12.00
NF, powd., bgs., 20-ton lots.100 lbs.10.50 - —
bgs. smaller lots 100 lbs.12.00 -13.00
Potassium oxalate, neutral, tech., fine gran., powd. 300-lb. dm., f.o.b. works E lb. .32 - —
Potassium pentaborate, gran., dms., c.l., works ton.219.50 - —
dms., ton lots, ex whse. ton.311.00 - —
dms., smaller lots, ex whse ton.316.00 - —

Powdered potassium pentaborate $10 per ton higher.

Potassium perchlorate, dms., c.l., works lb. .18½- —
dms., l.c.l., works lb. .19 - .20
Potassium permanganate, comi., kgs., works lb. .25 - .33
USP, dms., works lb. .29 - .35
Potassium persulfate, dms., c.l., works lb. .17½- —
dms., l.c.l., works lb. .18 - .21
Potassium pyrophosphate, tetrabasic, dms., works lb. .15½- .18½
Potassium prussiate red (see Potassium ferro-cyanide).
Potassium prussiate yellow (see Potassium (ferro-cyanide).

Potassium silicate, electrical grade, 30° Be, 1:2.0, dms., c.l., works 100 lbs. 6.50 - —
dms., l.c.l., 5 dm. lots or more, works 100 lbs. 7.25 - 7.65
tanks, works 100 lbs. 6.15 - —
40.5° Be, 1:2.1, dms., c.l., works. 100 lbs. 5.95 - —
dms., l.c.l., 5 dm. lots or more works 100 lbs. 6.70 - —
tanks, works 100 lbs. 5.60 - —
Glass grade, bgs., c.l., works. 100 lbs.17.30 -18.00
bgs., l.c.l., works 100 lbs.17.80 - —
Soln., 29° Be, 1:2.5, dms., c.l., works 100 lbs. 4.95 - —
dms. l.c.l., 5-dm lots or more, works 100 lbs. 5.70 - —
tanks, works 100 lbs. 4.60 - —
Potassium silicofluoride, bgs., works lb. .09½- .10

Potassium silicofluoride in drums, 0.4c. per lb. higher.

Potassium stannate, dms., frt alld, E lb. .750 - .823
Potassium sulfate, agricultural, bulk, c.l., works unit-ton. .67½- .69½

Inside price applies to tonnage contracted for prior to July 1, 1959.

Outside price applies to tonnage contracted for after that date but rent month.

Potassium bichromate in dms., ½c. higher.

Potassium sulfate, NF VII, cryst., dms lb. .31 - .33
NF VII, gran., dms lb. .18½- —
NF VII, powd., dms lb. .16 - .17
Potassium sulfocyanate, NF, cryst. (see Potassium thiocyanate).
Potassium thiocyanate, NF, cryst., dms., works lb. .96 - .98
Tech., dms., works lb. .77 - .79

Potassium titanate, etns., c.l., works lb. .16¼- —
etns., 5-ton lots, works lb. .16½- —
etns., 1-ton lots or less, works lb. .16¾- —
Potassium-magnesium sulfate, basis 40% K_2SO_4 and 18% MgO, bulk, works, base price ton.13.45 - —
bulk, works, July forward ton.14.00 - —
Potassium-sodium tartrate, NF, gran. or powd., 250-lb dms., c.l., f.o.b. works E lb. .42½- —
250-lb. dms., 5,000-lb. lots, same basis lb. .43 - —
250-lb. dms., same basis lb. .43½- —
Potassium-titanium fluoride, fib, dms works lb. .39 - .40
Potassium-zirconium fluoride, fib, dms. c.l., works lb. .50 —
fib dms. l.c.l., works lb .52½ 55
Pregnenolone, bots. gram. No prices
Pregnenolone acetate, bots. gram. No prices.
Procaine hydrochloride, USP, antibiotic grade, dms., 2,000-lb. lots, frt. alld lb. 2.25 - —
USP, ampule grade, dms., 1,000 lbs. lb. 2.40 - —
dms., 500 lbs. lb. 2.45 - —
dms., 100 lbs. lb. 2.50 - —
Progesterone, USP, bots. gram No prices.
Progesterone acetate, bots. gram No prices.
Propenyl guaethol, dms lb.24.30 -27.00
b-Propriolactone, dms., c.l., f.o.b. works lb. .89 - —
dms., l.c.l., l.t.l., same basis lb. .90 - —
tanks, same basis lb. .87 - —
Propionic acid, syn, pure dms., c.l., works lb. .23¼ —
dms., l.c.l., works lb. .24¾- —
tanks, works lb. .20¾- —
n-Propyl acetate, dms., c.l., dlvd. lb. .14¾- —
dms., l.c.l., dlvd. lb. .16¼- —
tanks, dlvd lb. .12¼- —
n-Propyl alcohol, dms., c.l., dlvd lb. .14 - .15
dms., l.c.l., dlvd. lb. .15½- .16½
tanks, dlvd. lb. .11½- .12½
n-Propyl gallate, dms., 100 to 2,000-lb lots works lb 3.90 - 4.40
n-Propyl-p-hydroxybenzoate, USP, dms lb 2.30 2.40
Propyl thiouracil, bots., 50 kilo lots or more kilo.55.00 —
bots. smaller lots kilo.55.10 -55.30
n-Propylamine, dms., c.l., dlvd lb. 1.24 - —
dms., l.c.l., same basis lb. 1.255 - —
n-Propylene dichloride, consumers', dms., c.l., dlvd. E lb. .0845- —
dms., l.c.l., same basis lb. .0995- —
tanks, same basis lb. .07 - —

Propylene dichloride prices in West 1c. higher, same basis

Propylene glycol, indust., dms., c.l., dlvd. E lb. .15 - —
dms., l.c.l., same basis lb. .16¼- —
tanks, same basis lb. .12½- —
USP, dms., c.l., dlvd. E lb. .17 - —
dms., l.c.l., same basis lb. .18¾- —
tanks, same basis lb. .14½- —
Propylene glycol methyl ether, dms., c.l., dlvd lb. .20 - —
dms., l.c.l., same basis lb. .21 - —
tanks, same basis lb. .18½- —
Propylene oxide, dms., c.l., dlvd. E. lb. .17 - —
dms., l.c.l., dlvd. E. lb. .18½- —
tanks, dlvd. E. lb. .14½- —
Psyllium seed, black, bgs. lb. .30 - .35
Blonde bgs. lb. .18 - .20
Husks, bgs. lb. .42 - .45
Pumice, dom., grd., coarse to fine, 0, ½, 1, 1½, 2, 3, bgs., ton lots lb. .03⅝- .04¼
bgs., smaller lots lb. .03⅞- —
Imp., Italian, silk-screen, coarse, bgs., ton lots lb. .06¼- —
fine, bgs. ton lots lb .04 - —
sun dried, coarse, bgs ton.60.00 —
fine, bgs. ton.60.00 -70.00
Pumpkin seed, bgs. lb. .25 - .26
Pyrethrins, syn (see Allethrin)
Pyrethrum flowers, fine grd., 0.9% pyrethrins, bgs., ton, works lb. .50 - —
Powd., 1.3% pyrethrins, bgs., ton, works lb. .71 - —
Pyrethrum liquid, 20/1 basis (2 grams pyrethrins per 100cc odorless base), dms., works gal. 9.60 - 9.80
Pyrethrum liquid, 100/1 basis (10 grams pyrethrine per 100cc odorless base), dms., works. gal.45.90 -46.90
Pyrethrum oleoresin, dewaxed, 20% dms., works lb.11.00 -11.35
purif., 20%, dms., works lb.11.00 -11.35
Pyridine, denat., dms c.l., works and frt equald gal 2.77 - —
dms l.c.l. same basis gal 2.80 - —
Refd., 2°, non-ret, dms., l.c.l., same basis lb. .70 - —
tanks, same basis lb. .65 - —
Pyridoxine hydrochloride, USP, 500-gram bots., dms., f.o.b. works, kilo.175.00 - —
Pyrites, Canadian, 48-50% S, mines, long-ton 5.00 - 6.00
Pyrocatechol (see Catechol)
Pyrogallic acid, NF (see Pyrogallol).
Pyrogallic acid, tech., bbls., 100-lbs., f.o.b. works lb. 3.50 - —
Pyrogallol, NF, 100 lb. dms. lb 3.50 - —
Pyroxylin, USP, bots. lb. 9.50 - —

Q

Quassia chips lb. .10 - —
Quicksilver (see Mercury metal)
Quince seed, bgs. lb. 1.30 - 1.40
Quinidine sulfate, USP, 1,000-oz. dm., oz. .74½- —
Quinine, NF, 1,000-oz. dm. oz. .3105- —
Quinine bisulfate, USP, 1,000-oz. dm. oz. .2330- —
Quinine hydrochloride, 1,000-oz. dm. oz. .3030- —
Quinine sulfate, USP, 1,000-oz. dm. oz. .2575- —
Quinoline, dms., c.l., frt. equald lb. .50¾- —
dms., l.c.l., same basis lb. .51¼- —
tanks, same basis lb. .50 - —

R

R salt, paste, dms frt alld., 100% basis lb. .98 - —
Powd., frt. alld. 100% basis lb. 1.08 - —
Rapeseed oil, dms. lb. .15 - .15¼
tanks lb. .13 - —
Rare earth chloride, 46%, dms., dlvd lb. .25 - —
Rare earth oxalate, NF, 45-50%, bgs., works lb. 1.15 - —
Rauwolfia serpentina root, powd., bbls. dms lb. 1.00 - 1.20
Red carmine, No. 40 (see Carmine).
Red oil (see Oleic acid)

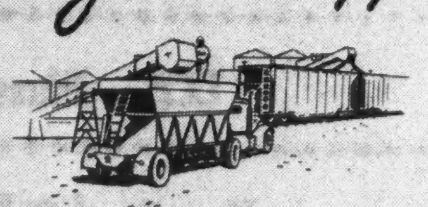
RED PIGMENTS
Red pigment quotations are listed individually. For example, prices on Red, lithol toner, may be found in the L's under Lithol red toner.

By every standard... WEST END MEASURES UP AS THE QUALIFIED SUPPLIER OF SODIUM SULFATE

- ACCURATE PROCESSING OF ORDERS
- UNIFORMLY HIGH QUALITY
- ABUNDANT STORAGE
- FLEXIBLE AND EFFICIENT LOADING AND SHIPPING
- EXTENSIVE PRODUCTION CAPACITY
- VAST NATURAL SOURCE OF RAW MATERIAL
- ALL COMMITMENTS SCRUPULOUSLY MET
- FRIENDLY, HELPFUL ATTENTION TO INDIVIDUAL NEEDS
- PROMPT, AUTHORITATIVE ANSWER TO EVERY INQUIRY

However you view your needs, you will find in West End a unique coordination of specialized services, extensive production facilities and product excellence essential to the prompt, efficient handling of individual requirements.

Flexible and efficient loading and shipping



Strategic location of West End plant permits fast, economical transport by rail or truck to any point in the West or throughout the nation. 30 minute in-and-out loading for bulk trucks at any hour of day or night through "serve yourself" delivery. Immediate shipment in West End's own leased hopper cars—ready at all times.

Stauffer CHEMICALS SINCE 1885 — 75 YEARS OF SERVICE TO INDUSTRY AND AGRICULTURE

WEST END CHEMICAL COMPANY • DIVISION OF STAUFFER CHEMICAL COMPANY
1956 WEBSTER STREET, OAKLAND 12, CALIF. • PLANT: WESTEND, CALIF.

Red precipitate (see Mercuric oxide, red).			
Red toner, Lake C, alizanine, bbls., works	lb.	1.25	—
Reserpine, cryst., bots	gram.	1.25	—
Resorcinol, tech grade, dms., c.l., works, frt. equald	lb.	.77½-	—
dms., l.c.l., same basis	lb.	.78½-	—
USP, powd., dms., works	lb.	2.95	—
Resorcinol monoacetate, NF, dms.	lb.	2.50	—
Rhatany root, bgs.	lb.	.14	.16
Rhodamine red toner, molybdated, PMA, kgs., works	lb.	6.00	—
Tungstated, PTMA, works, kgs	lb	6.60	—
Rhodinol, 5-lb. cans	lb.	42.00	-51.00
Synthetic	lb.	14.00	-16.00
Rhubarb root, India whole, bgs	lb.	.25	—
powd., bgs.	lb.	.35	—
Riboflavin, USP, fib. dms., kilo or more dlvd	kilo.	36.00	—
Riboflavin, USP, readily soluble, bots., dlvd	kilo.	130.00	—
Riboflavin, 5-phosphate-sodium fib. dms., kilo or more dlvd.	kilo.	104.50	—
Rice bran oil, clarified, dms. t.c.l.	lb.	.14½-	.15
tanks, dlvd. E	lb.	12½-	—
Ricinoleic acid (see Castor oil acids split).			
Rochelle salt (see Potassium sodium tartrate).			
Roofing pitch (see Coaltar pitch roofing)			
Rose oil, nat. Bulgarian bots	oz	72.00	—
Turkish bots.	oz	55.00	-58.00
Rosemary oil, Spanish, NF, cns., dms	lb.	.97	- 1.40
Spanish, tech., cns., dms.	lb.	.50	- 1.20
Rosin, gum and wood (see Naval Stores in Protective Coatings market)			
Rotenone, fib. dms., works, unit-lb.		.12	—
Resin 25-45% fib dms. works, unit-lb.		.12	—
Rottenstone, bgs. 5-ton lots, ex-whse	lb.	.03¾-	—
bgs. ton lots same basis	lb.	.04¼-	—
Rubber solvent, petroleum, 115°F-245°F b.r., tankcars, New Jersey and New York	gal.	.19	—
Group 3	gal.	.13875-	—
Houston, Texas	gal.	.155	—
Rue oil, bots	lb	2.75	3.00
Rutin, NF fib dms., 10 kilo lots	kilo.	13.00	—
fib. dms., 5 kilo lots	kilo.	13.50-	—
fib. dms., 1 kilo	kilo.	14.00	—
Ryania, 100%, powd., bgs., c.l., works	lb.	.22	—
bgs., l.c.l., same basis	lb.	.24	—

S

S acid, bbls., works	lb	3.25	—
Sabadilla seed, activated, ground with lime, bbls	lb.	.42	.44
Saccharin, calcium, fib dms., 1,000-lb lots, works	lb	2.50	—
USP, gran, soluble, dms., 1,000-lb. lots	lb.	1.40	—
dms., smaller lots	lb.	1.50	—
USP, powd., soluble, insoluble, dms., 1,000-lb. lots	lb.	1.45	—
dms., smaller lots	lb.	1.55	—
USP, powd., insoluble, dms., 1,000-lb. lots	lb.	1.43	—
dms., smaller lots	lb.	1.53	—
Safflower oil, dms., New York	lb.	.1755-	.18
tanks, Atl. Coast	lb.	.1555-	—
Saffron, Mancha Superior, tins	lb.	19.50	—
Safrol, dms	lb.	.70	—
Sage, Dalmatian, bgs.	lb.	.40	—
Greek, cns.	lb	.16	—
Italian, cns	lb.	.18	—
Sage oil, clary, bots.	lb.	17.50	-20.00
Dalmatian, cns.	lb.	2.85	- 3.25
Spanish, cns.	lb.	1.25	- 1.75
Sal soda (see Soda sal)			
Salicylaldehyde, dms., c.l., t.l., f.o.b. plant, frt equald	lb	1.23	—
dms. l.c.l. same basis	lb	1.25	—
Salicylamide, 100-lb. dms	lb	1.05	—
Salicylic acid, crude, fib dms., c.l., t.l., frt alld	lb.	.37¼-	—
fib. dms. l.c.l., frt. alld. on 100 lbs. or more	lb.	.38½-	—
Sublimed, tech. fib dms., c.l., t.l. dlvd	lb.	.39¼-	—
fib. dms., l.c.l. dlvd	lb.	.43½-	—
USP, cryst., 200-lb. fib. dms., 1,000 lbs. or more	lb.	.50½-	—
200-lb fib. dms., less than 1,000 lbs	lb.	.53½-	—
100-lb. fib. dms., 1,000-lbs. or more	lb.	.52½-	—
100-lb fib. dms., less than 1,000 lbs.	lb.	.55½-	—
USP, powd., 100-lb. fib. dms., 1,000 lbs. or more	lb.	.57½-	—
100-lb fib dms., less than 1,000 lbs	lb.	.60½-	—
Salol, NF, gran., bbls., kgs	lb.	1.20	—
Powdered salol, 25c per lb higher			
Salt, rock, paper bgs., c.l. 100 lbs		1.09	—
Salt, table vacuum, common, fine, paper bgs. c.l 100 lbs		1.34	—
Saltcake, dom., bulk, works, 100% Na_2SO_4 basis	ton.	28.00	—
Saltpeter (see Potassium nitrate)			
Sandalwood, E. Indian chips, bgs.	lb.	.65	.66
powd., fib. dms.	lb	75	76
Sandalwood oil, cns.	lb.	17.25	-18.00
Sarcosine, tech. tanks, f.o.b., works, frt equald	lb.	1.03	—
Sardine oil, crude, tanks, Pac. coast.	lb.	No stocks	
Sassafras oil, artif., dms.	lb.	.43	—
Nat., dom., dms.	lb.	1.45	2.15
Savory oil, cns	lb.	4.75	—
Schaeffer's salt, paste, dms., frt. alld. 100% basis	lb.	.85	—
Powd., bgs., frt. alld. 100% basis.	lb.	.95	—
Scopolamine hydrobromide, USP, bots	oz.	13.00	—
Sebacic acid, CP, bgs., c.l., works.	lb.	.69½-	—
bgs., l.c.l., works	lb.	.71½-	—
Purified, bgs., c.l., works	lb.	.65½-	—
bgs., l.c.l., works	lb.	.67½-	—
Seidlitz mixture, fib dms., 5,000-lb. lots	lb.	.30½-	—
fib. dms., smaller lots	lb.	.31	.32
Selenium, powd., 99½%, dms., dlvd.	lb.	7.00	—
Senega root, bls	lb.	3.00	—
Senna leaves, Alexandria, whole and half, bls	lb.	.20	.22
siftings	lb.	.16	—
Tinnevelly, No. 1, bls	lb.	.22	—
No. 2, bls.	lb.	.18	—
No. 3, bls.	lb.	.14	—
pods, bls.	lb.	.28	—
powd., bbls., bxs.	lb.	.17	—
Serpentaria root, bls.	lb.	6.50	—
Sesame oil, USP, dms.	lb.	.38	.39
Sesame seed, Colombian, bgs.	lb.	.15½-	—
Lebanese, hulled, bgs.	lb.	.19	—
Nicaraguan, hulled, bgs	lb.	.21½-	—
nat., bgs.	lb.	.14	—
Salvadorian, nat., bgs	lb.	.16	—
Shellac, bleached, bonedry, bgs., 1,500-lb. lots	lb.	.46	—
bbls., 1,500-lb. lots	lb.	.47	—
kgs., 1,500-lb. lots	lb.	48	—

Bonedry shellac prices for less than 1,500-lb. lots 1c. per lb. higher for all packages.

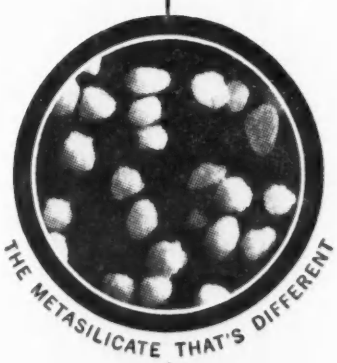
Shellac, bleached, refd., bgs., 1,500-lb. lots	lb.	.56	—
bbls., 1,500-lb. lots	lb.	.57	—
kgs., 1,500-lb. lots	lb.	.58	—
Shellac, orange, lemon No. 1, bgs., 10-bg. lots	lb.	.37	.39
lemon No. 2, bgs., 10-bg. lots	lb.	.34	.37
superfine, bgs., 10-bg. lots	lb.	.32	.34
Shellac in 1 to 10-bg. lots 1c. per lb. more.			
Shingle stain oil, tar distillate, dms., c.l., works	gal.	.37	—
dms., t.c.l., works	gal.	.48	—
tanks, works	gal.	.25	—
Sienna pigment, burnt, paper bgs., c.l., works	lb.	.06½-	.18½
paper bgs., t.c.l., works	lb.	.06¾-	.17¾
Raw, paper bgs., c.l., works	lb.	.06¾-	.16¾
paper bgs., t.c.l., works	lb.	.07	.17
Silica, amorph., dry-grd., 325 mesh, bgs., c.l., works	ton.	25.00	—
bgs., t.c.l., works, ex whse.	ton.	45.00	-55.00
Silica, hard-quartz, 99½%, 325 mesh, bgs., c.l., works.	ton.	20.00	—
bgs, t.c.l., works	ton.	25.00	—
99½%, 140 mesh, bgs., c.l., works	ton.	15.00	—
bgs., t.c.l., works	ton.	20.00	—
Silicon tetrachloride, tech., dms., c.l., works	lb.	.18	—
dms., t.c.l., works	lb.	.22	.30½
tanks, works	lb.	.17	—
Silver bullion, ingots, cs	Troy oz.	.91¼-	—
Silver cyanide, bots., 1,000-oz. lots,	oz.	.94¾-	—
bots., 500-oz. lots	oz.	.95¼-	—
bots., 100-oz. lots	oz.	.96¼-	—
Silver nitrate, CP, cryst., bots., 1,000 to 3,000-oz., f.o.b. works.	oz.	.87¼-	—
bots., 250-500 oz., same basis.	oz.	.87¾-	—
USP granular silver nitrate 4c. per oz. higher.			

Silver proteinate, mild, USP, bots., dms., 1,000-oz. lots	oz.	1.15	—
Strong, NF, bots., dms., 1,000-oz. lots	oz.	1.10	—
Snakeroot oil, Canada, cns	lb.	40.00	-43.00
Soapbark, crushed, bls	lb.	.30	- .35
Powd., bls.	lb.	.35	- .40
Whole, bls.	lb.	.20	- .25
Soda ash, dense, 58%, paper bgs., c.l., works 100 lbs.		1.90	—
paper bgs., l.c.l., stock pts., 100-lbs.		3.00	- 4.77
bulk, c.l., works 100 lbs.		1.60	—
Light, 58%, paper bgs., c.l., works 100 lbs.		1.85	—
paper bgs., l.c.l., stock pts. 100 lbs.		3.95	- 4.72
bulk, c.l., works 100 lbs.		1.55	—
Soda, caustic, flake, 76%, dms., c.l., works, frt. equald 100 lbs.		5.20	—
liq. 50%, sellers' tanks, works, dry basis 100 lbs.		2.90	—
50%, rayon type, sellers' tanks, works, dry basis 100 lbs.		2.90	- 3.00
73% sellers' tanks, works, dry basis 100 lbs.		3.00	—
liq., 73%, rayon type, sellers' tanks, works, dry basis.	lb.	3.00	- 3.10
solid, 76%, dms., c.l. works. 100 lbs.		4.50	—
Soda, sal, conc., bgs., c.l., works, 100 lbs.		2.50	—
bgs. smaller lots, works 100 lbs.		2.80	—

Sodium acetate, anhyd., bgs., c.l., dlvd E	lb.	14½-	—
NF, 60% gran, dms. c.l., works.	lb.	15½-	—
dms., t.c.l., works	lb.	.17½-	—
Sodium alginate, NF, white powd. dom. 300 lbs or more	lb.	1.02	—
Sodium p-aminosalicylate, dms., 100-lb lots or more frt adjusted	lb	1.90	—
Sodium antimoniate bgs., c.l. dlvd E	lb.	.27½-	—
bgs., l.c.l., dlvd. E	lb.	.29	—
Sodium arsenate, 60% arsenic pentoxide, dms., any quantity, f.o.b. works	lb.	.40	—
Sodium arsenite, 90% pink powder, 75% arsenious oxide, dealers, dms., ton lots or more, works	lb.	.27½-	—
dms., less than ton lots, works	lb	.18	.19
Sodium ascorbate, dms. 25-50 kilo dms., f.o.b. works	kilo	10.00	—
10-kilo dm. same basis	kilo	10.35	—
5-kilo dm. same basis	kilo.	10.75	—
1-kilo bot., same basis	kilo.	11.00	—
Sodium benzoate tech., dms., c.l., t.l., frt. alld	lb.	.35	—
dms., t.c.l., same basis	lb.	.39	—
USP, dms., c.l., t.l. frt. alld	lb.	.38	—
dms., ton lots, same basis	lb.	.43	—
dms., 1,000-lb lots, same basis.	lb.	.45	—

Cowles CRYSTAMET

(sodium metasilicate pentahydrate)



Crystamet resists caking because particles are rounder and smoother. Note also in the magnified photos at right how Crystamet particles are far more uniform in size. This means Crystamet is virtually dust-free, another factor that makes Crystamet easier to handle, easier to mix and resistant to caking.

For a free sample of Crystamet 2040, or the coarser 1020 or finer 3080 grades, and a technical data sheet, just mail request on your company letterhead.

"First real improvement in metasilicate in 25 years."

1885—75th Anniversary—1960

Cowles CHEMICAL COMPANY

7018 Euclid Avenue Cleveland 3, Ohio

Sodium Bicarbonate—Sulfur Dichloride

Sodium bicarbonate USP, gran. bgs., c.l., works 100 lbs 2.95 - —
bgs. l.c.l., works 100 lbs 3.85 - —
USP, powd., bgs. c.l., works 100 lbs 2.55 - —
bgs., l.c.l., works 100 lbs 3.45 - —
Sodium bichromate, gran., ngs., c.l. t.l. works lb .13 - —
bgs., l.c.l., works lb .13½- .14¾
Sodium bichromate in dms ¾c. per lb higher
Sodium bifluoride bbls. c.l. works, frt equald lb .19½- —
bbls., l.c.l., same basis lb .2025- —
Sodium bisulfate, bulk c.l. works 100 lbs 2.00 - —
dms., c.l., frt. equald 100 lbs 3.00 3.60
dms., l.c.l., frt. equald 100 lbs 3.50 4.10
Sodium bisulfite, anhyd., bgs., c.l., works 100 lbs 5.00 - —
bgs., l.c.l., works 100 lbs 5.45 - —
Soln., 35° bbls. c.l. works 100 lbs 1.70 - —
bbls., l.c.l., works 100 lbs 2.20 - —
Sodium borate (see Borax)
Sodium borohydride, powd., dms., c.l., works lb.15.90 - —
dms., l.c.l., works lb.33.00- 40.00
Sodium borohydride, stabilized water soln., 12% NaBH4, 100% basis, dms., works lb.15.00 - —
Pelletized sodium borohydride $1 per lb higher in 1,000-lb lots.
Sodium bromide USP gran., dms., works lb. .40 - —
Sodium carbonate, cryst. monohydrated (see Soda, sal)
Sodium carbonate, mononydrated, bgs., c.l., works 100 lbs 3.10 - —
bgs., l.c.l., works 100 lbs 3.50 - —
Sodium carboxymethyl cellulose (see CMC).
Sodium chlorate, cryst., 350-lb. dms., c.l works lb .09 - —
dms., l.c.l., works lb .09½- .10½
Sodium chlorate in 100-lb dms. only, ¼c. per lb higher
Sodium chloride, tech. (see Salt)
Sodium chloride, USP, gran., bgs. lb .05 - —
Sodium chlorite, tech., ums., c.l., works lb .58 - —
dms., 20-dm lots or more works. lb .66 - —
dms. smaller lots, works lb .70 - .73
Sodium chloroacetate, tech., dms., c.l., works lb .27 - —
dms., l.c.l., works lb .28 - —
Sodium chromate, anhyd. fib. dms., c.l., t.l., works lb .14¾- —
fib dms. l.c.l., works lb .15¼ .16½
Sodium chromate, tetrahydrate, bgs., c.l., t.l. works lb .1015- —
bgs., l.c.l. lb .1065- .1190
Sodium citrate, anhyd. 200-lb. dm., f.o.b works E lb. .62 - —
NF VIII, gran. bgs. c.l., same basis lb .26 - —
USP XIV gran. bgs. c.l., same basis lb .29 - —
Sodium citrate, USP powd prices ½c higher.
Sodium cyanate, dms., 1,000-lb. lots, works lb .85 —
dms. smaller lots, works lb .90 1.10
Sodium cyanide, briquettes or gran., 97 percent min., dms., works 20,000-lb. lots lb. .176 - —
dms., same basis 5,000 to 19,999-lb. lots lb .188 - —
dms., same basis, 1,000 to 4,900-lb. lots lb .198 - —
Sodium cyclamate, 100-lb dm., f.o.b. works lb. 1.95 - —
Sodium diacetate anhyd., 39-41% acetic acid, dms., c.l., works lb .18 - —
250-lb dms. l.c.l. works lb .18¾- —
Tech., 33-35% acetic acid, dms., l.c.l., works lb .13 - —
250-lb dms. l.c.l. works lb .15¼ —
Sodium dimethyl dithiocarbamate, 40% soln dms c.l., t.l., frt alid., 100% basis lb .42 —
dms. l.c.l., t.l.l. same basis lb .47 .52
tanks, same basis lb .38 —
Sodium ferrocyanide, bgs., 10-ton lots lb. .13¼ —
bgs. smaller lots lb. .14¾- —
Sodium fluoride, white, 97%, fib. dms, c.l., works, frt. equald lb. .1390 —
fib. dms. l.c.l., works, frt equald lb. .1465 —
Sodium formate, bgs., c.l. works. 100 lbs 7.05 - —
bgs. l.c.l. ex whse 100 lbs 8.65 - —
Sodium gentisate 100-lb fib dms.lb 5.50 - —
Sodium gluconate, refd 250-lb dm., f.o.b. works E lb. .84 - —
Tech. bgs. c.l. t.l. same basis lb. .34 - —
Sodium hydride, 50% soln. in oil, dms. works lb. 1.25 2.50
25% soln. in oil, dms. 50 lbs or less, f.o.b shipping point lb 2.20 - —
dms. 50-99 lbs, same basis lb 1.77 - —
dms. 100-999 lbs. same basis lb 1.20 - —
dms., 1,000 lbs or more same basis lb .95 - —
Sodium hydrosulfide (see Sodium sulfhydrate)
Sodium hydrosulfite dms. c.l., frt. alid lb. .23½- —
dms. l.c.l., frt. alid. lb. .25¾- —
Sodium hydroxide NF pellets 100-lb dms. 1 to 100 dm lots. lb .23½ .28
Sodium hydroxide tech (see Soda, caustic)
Sodium hypophosphite NF, dms., 1,000-lb lots lb .97 —
Sodium hyposulfite (see Sodium thiosulfate).
Sodium iodide, USP 300-lb dm., f.o.b works lb. 1.98 - —
Sodium lauryl sulfate, dms., c.l., dlvd lb. .20½- —
dms., l.c.l., dlvd lb. .21½- —
tanks, dlvd lb. .19½- —
Sodium lignin sulfonate, bgs., c.l., works 100 lbs 4.25 6.50
l.c.l., bgs. works 100 lbs 4.40 7.00
Sodium metabisulfite (see Sodium bisulfite)
Sodium metaborate octahydrate, gran., bgs., c.l., works ton.210.00 - —
bgs., ton lots, ex whse 100 lbs. 8.00 - —
bgs., smaller lots, ex whse. 100 lbs 9.25 -11.25
Tetrahydrate, bgs., c.l., works. ton.210.00 - —
bgs., ton lots, ex whse 100 lbs.13.93 - —
bgs. smaller lots, ex whse. 100 lbs.15.18 -17.18
Sodium metallic bricks, c.l works. lb. .21 - —
Fused, 18,000-lb lots or more, works lb. .19½- —
tanks, works lb. .17 - —
Sodium metalinate bbls. frt alid. lb. .62 - —
Sodium metaphosphate, bgs., c.l., f.o.b. shipping pt 100 lbs.11.10 - —
bgs., l.c.l., same basis 100 lbs.11.85 - —
dms., c.l., same basis 100 lbs.11.70 - —
dms., l.c.l., same basis 100 lbs.12.45 - —

Sodium metasilicate, anhyd., bgs., c.l., works 100 lbs 5.70 - —
bgs., 6,000-19,900 lb lots works 100 lbs 6.05 - —
dms., c.l., works 100 lbs 6.20 - —
dms., l.c.l. works 100 lbs 6.55 - —
Sodium metasilicate pentahydrate, bgs., c.l. works 100 lbs 4.45 - —
bgs., l.c.l. works 100 lbs 4.80 6.75
dms., c.l., works 100 lbs 4.95 —
dms., l.c.l., works 100 lbs 5.30 7.25
Sodium molybdate anhyd., dms., works, frt equald lb. .92 .99
Cryst., dms., works, frt. alld lb. .74 .76
Sodium monoglutamate (see Monosodium glutamate).
Sodium monohydrate (see Sodium carbonate, monohydrated)
Sodium naphthionate, bbls., lb. .70 - —
Sodium nitrate, dom., crude, bgs., c.l. works ton.48.00 - —
bulk, c.l., works ton 44.00 - —
Imp., crude, 100-lb. bgs., c.l., Atl., Gulf, Pac. whse ton.48.00 - —
bulk, c.l., same basis ton.44.00 - —
Sodium nitrite, USP, bbls., c.l., works, frt equald 100 lbs 9.00 - —
bbls., l.c.l. same basis 100 lbs.11.00 - —
Sodium orthosilicate, conc., dms., c.l., works 100 lbs. 6.70 - —
dms. l.c.l., works 100 lbs 7.05 - 7.65
Hydrated flake bbls., c.l., works. 100 lbs 5.05 - —
bbls, l.c.l., works 100 lbs 7.60 7.90
Sodium oxalate, 58% bgs., works 100 lbs 12.35 - —
99%, bgs., works 100 lbs.15.40 - —
Sodium para-aminobenzoate (see Sodium p-aminobenzoate)
Sodium para-aminosalicylate (see Sodium p-aminosalicylate)
Sodium pentachlorophenate, briquets, dms. c.l. works, frt. equald lb 26 —
dms. l.c.l. same basis lb 27½ .34
Pellets, dms., c.l., same basis lb .26 - —
dms c.l. same basis lb 27½ .34
Powd., dms., c.l. same basis lb .25 - —
dms, l.c.l., same basis lb .26½- .33
Sodium pentobarbital, USP, dms., 100 lbs. or more lb 6.00 - —
Sodium perborate, NF, tech., bgs., c.l. works lb. .18½- —
bgs., l.c.l., works lb. .19 .21
Sodium peroxide dms., c.l., t.l., dlvd, E. of Miss lb. .21½- —
dms. l.c.l., same basis lb .22 - .22½
Sodium phenobarbital USP 100-lb [illegible] lb 3.75 —
Sodium phenosulfonate USP IX, gran. dms lb. .52 - .53
NF, powd., dms lb .55 - .56
Sodium phosphate, dibasic, anhyd., bgs., c.l., frt. equald, 100 lbs 7.95 - —
bgs., l.c.l. same basis 100 lbs 8.35 9.40
Dibasic, cryst., bgs., c.l., t.l., frt. equald 100 lbs. 4.60 - —
bgs. l.c.l. frt equald 100 lbs 5.00 5.75
Dibasic, duohydrate, bgs., c.l., frt. equald 100 lbs. 7.60 - —
bgs. l.c.l. same basis 100 lbs 8.10 - —
USP dried, powd. bgs. dms., works lb .19 - .20½
Monobasic, anhyd., bgs., c.l., frt. equald 100 lbs. 9.00 —
bgs., l.c.l. same basis 100 lbs 9.40 -10.00
Tribasic, anhyd., bgs., c.l., frt. equald 100 lbs. 9.00 - —
bgs. l.c.l. frt. equald 100 lbs 9.45 -10.05
Sodium phosphate in dms 60c to 80c higher than bgs
Sodium picramate, tech. paste, dms., f.o.b. works frt equald lb. .90 - —
Sodium prussiate, yellow (see Sodium ferrocyanide)
Sodium pyrophosphate acid, bgs., c.l., works, frt equald. 100 lbs 11.10 —
bgs., l.c.l., same basis 100 lbs.11.85 -12.35
Sodium pyrophosphate, ferric, dms. c.l. t.l. works lb .36 —
dms. l.c.l., works lb .37 .39
Tetrabasic, anhyd., bgs., c.l., works, frt. equald 100 lbs. 7.81 - —
bgs., l.c.l. same basis 100 lbs 9.21 9.71
Sodium salicylate USP, dms. 1,000-lbs or more lb 78½- —
dms. less than 1,000 lbs dms lb .81½- —
Sodium sesquicarbonate, bgs. c.l., works 100 lbs 2.35 —
bgs., l.c.l., dlvd. zone 1 100 lbs 4.10 4.35
dlvd. zone 2 100 lbs 4.35 4.60
dlvd. zone 3 100 lbs 4.75 4.90
dlvd. zone 4 100 lbs 5.35 5.60

Sales zones are: (1) All states E. of Miss., R and N of south bound of Ky and Va, Ala., La., and Miss. south of 31° Tex E of 100°; S of 31° Fla.; also Me. N H and Vt in which there are special county zones; Davenport, Ia., and St Louis. (2) Ark E of 98° Ga.; Iowa (except Davenport) Minn Mo (except St Louis) Neb E of 98° N C., S C., Tenn and Tex N of 31 and E of 100° (except Wichita Falls); also Ala La and Miss. No of 31° (3) Ark W of 98°, Kan., Neb W. of 98° N D., Okla., S D Tex W of 100° (including Wichita Falls excluding El Paso); (4) Ariz., Colo., Idaho, Mont., Nev., N. M., Utah, Wyo and El Paso Tex.

Sodium sesquisilicate, anhyd. bgs., c.l., t.l. works 100 lbs 5.70 - —
dms., c.l., t.l. works 100 lbs 6.20 - —
Sodium sesquisilicate, hydrated, bgs., c.l., works 100 lbs. 5.00 - —
bgs., 6,000-19,900 lb lots, works. 100 lbs 5.35 - —
dms., c.l., works 100 lbs 5.50 - —
dms., 6,000-19,900 lb. lots, works. 100 lbs. 5.85 - —
Sodium silicate, liq., 40° Be, 1:3.2, turbid, dms., c.l., works 100 lbs. 1.65 - —
dms. l.c.l., works 100 lbs 1.90 2.40
tanks, works 100 lbs 1.20 —
47° Be., 1:29.9, turbid, dms., c.l., works 100 lbs 2.25 - —
dms., l.c.l. works 100 lbs 2.60 3.45
tanks, works 100 lbs 1.90 - —
52° Be., 1:2.4, turbid, dms., c.l., works 100 lbs 2.65 - —
dms., l.c.l., works 100 lbs 3.00 3.50
tanks, works 100 lbs 2.30 - —
Solid, 1:3.2, bgs., works ton.67.50 - —
Sodium silicofluoride, bgs., c.l., works lb. .065 - —
bgs., l.c.l., works lb. .725 - —
Sodium silicofluoride in dms, 0.4c. per lb higher
Sodium stannate, dms. works, frt. alld. E lb. .628 - .688
Sodium sulfa drugs (see Sulfa name).
Sodium sulfanilate, bbls. works lb. .22 - —
Sodium sulfate, NF VII, dried, powd., dms lb. .22½- —
Tech., anhyd., bgs., c.l., dlvd. E. ton.54.00 - —
Tech., detergent, rayon grade, bgs., c.l., works ton.36.00 - —
bulk, c.l. works ton.32.00 - —
USP, cryst., fib. dms. lb. .17½- .18

Sodium sulfhydrate, flake, 70-72%, dms., c.l., works frt. equald, lb. .07¼- —
dms., l.c.l., same basis lb. .08¼- —
Liq., 40-44%, tanks, works, 100% basis ton.130.00 - —
Sodium sulfide, flake, dms., c.l., works, E., frt. equald lb. .06 - —
dms., l.c.l., same basis lb. .07 - —
Fused, bbls., c.l., works, E., frt. equald lb. .05½- —
bbls. l.c.l., same basis lb. .06½- —
Sodium sulfite, anhyd., powd., bgs., c.l., works 100 lbs. 7.55 - —
bgs., l.c.l., same basis 100 lbs. 7.95 - —
Anhyd., tech., bgs., c.l., works. 100 lbs. 3.50 - —
bgs., t.l., same basis 100 lbs. 4.00 - —
Sodium sulfocyanide, CP (see Sodium thiocyanate)
Sodium tetraborate (see Borax)
Sodium tetrasulfide, liq., 40% dms., c.l., works, frt equald lb. .04½- —
dms., l.c.l. same basis lb. .05½- —
Sodium thiocyanate, CP, dms lb. .55 .65
Tech., anhyd. dms., 1 ton lots or more, works lb. .317 - —
dms. less than ton lots, works lb. .337 - —
Sodium thiosulfate, NF cryst. bbls. lb. .13½- —
Tech., anhyd., 100-lb. bgs., c.l., t.l., frt. equald 100 lbs. 7.75 - —
100-lb bgs. l.c.l., t.l.l., frt. equald 100 lbs. 8.15 - —
Sodium thiosulfate, tech., anhyd., photo grade, 64-lb. bgs., c.l., t.l., frt. equald lb. .0775- —
64-lb. bgs., l.c.l., t.l.l., frt. equald lb. .0815- —
Tech., pentahydrate, photo grade, 100-lb. bgs., c.l., t.l., frt. equald 100 lbs. 4.95 - —
Sodium thiosulfate, tech., pentahydrate, bgs., l.c.l., t.l.l., frt. drate, photo grade, 100-lb. equald 100 lbs. 5.20 - —
Sodium titanate, ctns. c.l., works. lb. .14¼- —
ctns., 5-ton lots, works lb. .14½- —
ctns., 1-ton or less, works lb. .14¾- —
Sodium trichloroacetate, 90%, 100-lb dms. c.l. frt alld E. lb. .35 - —
50-lb dms. c.l., frt alld E lb. .35½- —
10-lb cns., c.l. frt alld E lb .42 —
Prices on Sodium trichloroacetate W of the Rockies are 1¾c per pound higher.
Sodium tripolyphosphate, bgs., c.l., works, frt. equald 100 lbs. 8.16 - —
bgs. l.c.l., same basis 100 lbs 8.56 8.96
Sodium trisilicate, powd., 1:3.2 bgs., c.l., works 100 lbs 8.95 —
bgs., l.c.l., works 100 lbs 9.70 -13.13
dms., c.l., works 100 lbs 9.45 —
dms., l.c.l. works 100 lbs.10.20 -10.60
Sodium tungstate, tech., kgs dlvd. E lb. 1.32 - —
Sodium-ammonium phosphate, purif., cryst., dms., works lb. .52 - —
Sodium-carboxymethyl cellulose (see CMC).
Sodium-cinchophen (see Cinchophen-sodium).
Sodium-formaldehyde sulfoxylate, dms., c.l., dlvd lb. .21 —
dms., l.c.l., same basis lb. .21½- —
Sodium-zirconyl sulfate, fib. dms., 1,000-lb lots or more works lb. .28 - —
fib. dms., smaller lots, same basis lb. .30 - —
Solvent naphtha, coaltar, high-flash, tanks, frt equald gal. .30 - .35½
Solvent naphtha, petroleum, straight aromatic, 310°F-360°F b.r., 14°-16°C m.a.p., tankcars, New Jersey and New York gal. .31 - —
Houston, Texas gal. .29 - —
355°F-420°F b.r., 17°-18°C. m.a.p., tankcars, New Jersey and New York gal. .32 - —
Houston Texas gal. .30 - —
Solvent naphtha, petroleum, partial aromatic, 211°F-265°F b.r., 31°C. m.a.p., tankcars New Jersey and New York gal. .235 - —
266°F-340°F b.r., 22°C m.a.p., tankcars New Jersey and New York gal. .275 - —
319°F-380°F b.r., 27°C m.a.p., tankcars, New Jersey and New York gal. .285 - —
322°F-395°F b.r., 28°C. m.a.p., tankcars, New Jersey and New York gal. .295 - —
Sorbitan monostearate, tib dms., 20,000-lb. lots, works lb. .33 - —
fib dms., 10,000 to 20,000-lb. lots, works lb. .35 - —
fib. dms., smaller lots, works lb. .38 - .40
Sorbitan tristearate, fib dms., 20,000-lb lots works lb. .34 - —
fib dms., 10,000 to 20,000-lb. lots, works lb. .36 - —
fib. dms., smaller lots, works lb. .39 - .41
Sorbitol, NF, reg., 70% aqueous, dms., c.l., works lb. .18 - —
dms., l.c.l., works lb. .19 - —
tanks, works lb. .16¼- —
Cryst., resin grade, pellets, dms., c.l., works lb. .23 - —
dms., 1 to 5-ton lots, works. lb. .25 - .26
Sorbital, powd., dms., c.l., works lb. .36 - —
dms. 1 to 5-ton lots, works. lb. .38 - .39
Soln., coml., aqueous, dms., c.l., works lb. .24¼- —
dms., ton lots, works lb. .25 - —
dms., smaller lots, works lb. .25¼- —
tanks, works lb. .23¼- —
Soya protein, chemically isolated, old process, bgs., c.l., works. lb. .23 - —
bgs., l.c.l., works lb. .23¼- .23½
Chemically isolated new process, bgs., c.l. works lb. .20 - —
bgs., l.c.l., works lb. .20¼- .20½
Soybean meal, 44%, bulk, unrestricted, Decatur ton.56.50 - —
Soybean oil, crude, tanks, Decatur, lb. .08 - —
Foots, soapstock, acid 95%, tanks, N. Y lb. .05¼- —
Refd., alkali, dms. lb. .1230- .1255
tanks lb. .1030- —
clarified, dms. lb. .1180- .1205
tanks lb. .0980- —
salad, dms. lb. .1210- .1235
tanks lb. .1010- —
Soybean oil acids, dbl. dist., dms., lb. .17 - .19½
tanks lb. .14½- —
S. D., dms. lb. .15¾- .18¼
tanks lb. .13¼- —
Sparteine sulfate, cns., 100 oz. or more oz. .80 - —
Spearmint leaves, dom. bls. lb 75 —
Spearmint oil, NF, dms. lb. 9.00 -11.75
Sperm oil, bleached, winter, 45° dms lb. .1475- .1575
tanks lb. .1275- —
Nat., winter, 45°, dms. lb. .1375- —
tanks lb. .1175- —

Spermaceti wax, blocks, cs. lb. .31 - .33
Cakes, cs. lb. .32 - .34
Spruce oil cns., dms. lb. 2.10 - 2.55
Squill, white, bls lb. .16 - .18
Powd., bbls., bxs. lb. .17 - .20
St. John's bread, edible, bls. lb. .17 - —
Stannic chloride, anhyd., dms., works lb. .785 - .795
Stannic oxide, dms., dlvd. lb. 1.045 - 1.055
Stannous chloride, anhyd dms., works lb. .986 - 1.244
Hydrous, cryst., dms., works lb. .85½- .86½
Stannous sulfate, dms., works lb. 1.04 - 1.064
Star root (see Helonias root)
Stargrass root (see Aletris root).
Stavesacre seed, bgs lb. .60 .61
Stearic acid, dbl., pressed bgs. lb. .15¾- .18¼
Single-pressed, bgs. lb. .15¼- .17¾
Triple-pressed, bgs. lb. .17½- .20
Stearine, oleo (see Oleostearine)
Stoddard solvent, petroleum, tanks, east coast, New Jersey, New York gal. .18 - —
tanks, Houston gal. .1475- —
tanks, group 3 gal. .12875- —
Stramonium leaves, bgs. lb. .13 - —
Streptomycin sulfate, bulk, gram. .035 - .036
Strontium bromide, NF, cryst., 100-lb. dm., f.o.b. E lb. .92 - —
Strontium carbonate, pure, dms., 5-ton lots or more, works. lb. .35 - —
dms., 1-ton lots, works lb. .37 - —
Tech., dms., works lb. .19 - —
Strontium chromate fib. dms., dlvd. lb. .48 - —
Strontium iodide, jars, 25-lb. lots. lb 3.57 - —
Strontium nitrate, bgs., c.l., works. 100 lbs.11.00 - —
bgs., l.c.l., works 100 lbs.12.00 - —
Strontium salicylate NF, dms lb 1.88 - —
Strontium sulfate, air floated, 90%, 325 mesh, bgs., works ton.56.70 -66.15
Strophanthin G (see Ouabain, USP)
Strophanthin K, bots oz.25.00 -25.50
Strophanthus seed, Kombi, biologically tested, bgs lb 3.50 3.75
Styrax gum, USP cs lb. 4.50 - 5.50
Styrene monomer, polymer grade, 99.6% dms. c.l. frt. alld. lb. .17 - —
dms., c.l., same basis lb. .19 - —
tanks, same basis lb. .141½- —
Tech., 99.2%, dms., c.l. lb. .1472- —
dms., l.c.l., same basis lb. .1672- —
tanks, bulk, same basis lb. .1222- —

Above prices are escalated for each calendar quarter on the basis of cost of crude oil at the well, cost of petroleum refining labor, and prices in the three major sections of the Wholesale Commodity Price Index.

Styrolyl acetate, bots lb 1.25 - 1.45
Succinic acid., purif., cryst., dms., t.l., frt. alld. lb. .62 - —
dms., l.t.l., same basis lb. .63 - .75
Succinic anhydride, dms., c.l., t.l., dlvd lb. .51 - —
dms., l.c.l., same basis lb. .52 - —
Sucrose, refd. white bgs. refy lb. .0920- —
Sucrose acetate isobutyrate, 90%, dms., t.l., dlvd. lb. .33½- —
dms., l.t.l., same basis lb. .35 - —
tanks, same basis lb. .31 - —
100%, t.l., dms., dlvd. lb. .35½- —
l.t.l., dms., same basis lb. .37 - —
Sucrose octa-acetate, denaturing grade, 100-200-lb. lots, bgs., l.c.l. works lb. 1.00 - —
Sugar (see Sucrose)
Sugar cane wax, dom., refd., slabs, 80-lb ctns. works lb. .60 - .65
80-lb ctns., spot lb. .65 - .75
Sulfabenzamide dms. kilo 8.80 9.90
Sulfabenzamide-sodium, dms. kilo 9.00 -10.10
Sulfacetamide, USP, fib dms. kilo. 6.61 6.83
Sulfacetamide-sodium, USP, fib. dms kilo 8.15 9.25
Sulfadiazine, USP, microcrystals, dms kilo.23.35 -24.45
USP, powd., dms. kilo.22.60 -23.70
Sulfadiazine-sodium, USP, dms kilo.24.80 25.90
Sulfaguanidine, NF X, dms kilo 5.50 6.60
dms kilo.23.50 -24.60
Sulfamerazine-sodium, USP, powd., dms kilo.24.80 -25.90
Sulfamethazine, USP XV, microcrystals, dms kilo.19.65 -20.75
USP XV, powd., dms kilo.18.75 -19.85
Sulfamic acid, cryst., dms., c.l., t.l., works 100 lbs.16.00 —
dms., l.c.l., t.l.l., works 100 lbs.17.50 -18.50
Gran., dms. c.l., t.l., works. 100 lbs.14.75 —
dms., l.c.l., t.l.l., works 100 lbs.16.25 -17.25
Sulfanilamide, NF, reg., 1,000 lb., frt. equald lb. 1.50 - —
NF, fib, dm., frt. equald lb. 1.55 - —
Sulfanilamide quinoxaline, veterinary dms kilo.16.28 - —
Sulfanilic acid, tech., dms. c.l., frt. alld lb. .21 - —
dms., l.c.l., frt. alld. lb. .23 - —
Sulfapyridine USP XV powd. bots. tins kilo.15.45 -16.55
Sulfapyridine-sodium, monohydrate, dms kilo.16.55 -17.65
Sulfathiazole, NF X, microcrystals, dms kilo. 6.25 - 6.90
NF X, powd., dms. kilo. 5.50 - 6.15
Sulfathiazole-sodium, NF X, dms., 1,000-lb lots or more lb 2.35 - —
Sulfur, coml., flour, bgs., mines. 100 lbs 2.35 - —
bbls, mines 100 lbs 3.30 - —
lump, bgs., mines 100 lbs 2.25 - —
bbls, mines 100 lbs 2.80 - —
Crude, dom., bright, bulk, f.o.b. cars, mines, long-ton.23.50 - —
Crude, export, f.o.b. vessels, Gulf ports, long-ton.25.00 - —
US and Canada f.o.b vessels Gulf ports long-ton.25.00 - —

Domestic dark sulfur prices are $1 per long-ton lower

Sulfur, crude, imp., Mexican, bulk, filtered, f.o.b. vessel, Coatzacoalcos long-ton.24.00 - —

Mexican dark sulfur price is $1 per long-ton lower

Sulfur, refd., flowers, NF, bgs., mines 100 lbs. 5.65 - —
bbls., mines 100 lbs. 7.00 - —
flour, light, bgs., mines 100 lbs. 5.25 - —
bbls., mines 100 lbs. 6.25 - —
lump, bgs., mines 100 lbs. 4.95 - —
rolls, bgs., mines 100 lbs. 5.50 - —
bbls., mines 100 lbs. 6.25 - —
salt block, bgs., mines 100 lbs. 4.65 - —
virgin block, bbls. mines 100 lbs 4.70 - —
Sulfur, rubbermakers, coml., reg., bgs., mines 100 lbs 2.45 - —
bbls. mines 100 lbs 3.70 - —
98-100%, passing through 325 mesh, bgs. mines 100 lbs 2.55 - —
bbls. mines 100 lbs 3.80 - —
refd., bgs., mines 100 lbs 4.90 - —
bbls., mines 100 lbs. 6.05 - —
treated, 2.5% mineral oil, bgs., mines 100 lbs 2.75 - —
bbls., mines 100 lbs 4.00 - —
Sulfur dichloride, ret. dms. c.l., works, frt. equald lb. .05¼- —
ret. dms., l.c.l., same basis lb. .06¼- —
tanks, same basis lb. .04½- —

New flaker in action

Flaked fatty acids that are free from "fines" and dust, and that will not lump in storage, are the specialty of our new flaker at our McCook plant. This new equipment represents a substantial improvement over older flaking methods.

By constantly searching for important processing innovations, Armour can continue to offer such high quality fatty acids as its NEO-FAT® 18. This is Armour's Commercially Pure Stearic, with an extremely low iodine value, high melting point, and an exceptionally high stearic acid content. Neo-fat 18 is especially noted for its stability, purity, and uniformity from lot to lot. These advantages assure your product longer storage stability and shelf-life, better performance, and a quality reputation.

We'll be happy to furnish samples on request. If you'd like to learn more about the way Armour processes fatty acids, you are welcome to visit the Armour plant at McCook, Illinois. Phone or write for details.

If you can't visit the plant, send for the new booklet which describes plant operations: "Progressive Aliphatic Chemistry—a Report on Chemical Development by Armour."

ARMOUR INDUSTRIAL CHEMICAL COMPANY

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Sulfur dioxide, liq. comi., cyls., works, frt equald	lb	.10	.13
multi-unit cars works	lb	.0535-	—
tanks works	lb.	.045	—
Sulfur dioxide, refrigeration, cyls., dlvd	lb.	.33	- —
Sulfur monochloride 55-gal non-ret. dms., c.l., frt. equald	lb.	.05¼-	—
dms, l.c.l., same basis	lb.	.05¼-	—
tanks, same basis	lb.	.04½-	—
Sulfuric acid 60° Be, cbys., c.l. works	100 lbs	2.00	- —
cbys., l.c.l., works	100 lbs	2.30	- —
tanks, works	ton	18.60	- —
66 °Be cbys c.l., works	100 lbs	2.25	—
cbys., l.c.l., works	100 lbs	2.55	3.35
tanks works	ton	22.35	—
98% tanks, works	ton	23.50	- —
99% tanks works	ton	23.70	- —
100% tanks works	ton	23.95	- —
CP, NF, consumers' cbys., c.l., frt. equald	lb.	.42¾-	—
Sulfuric acid, CP, NF, consumers', cbys., l.c.l., same basis	lb.	.14¼-	.14¾
5-pt bots, extra cs., c.l. works, frt alld	lb	16¼	—
5-pt bots, extra cs., l.c.l. same basis	lb	17¾	.15¾
Sulfuric acid, fuming (oleum) 20% tanks, works	ton	25.00	- —
40% tanks, works	ton	29.00	- —
65% tanks works	ton	39.50	- —
Superphosphate run-of-pile, under 22% a.p.a., pulv. bulk., c.l. Baltimore	unit-ton	.90	.93
bulk, c.l. Carteret, N J	unit-ton	.90	- .93
bulk, f.o.b. vessel	unit-ton	1.02	- —
Superphosphate, triple 48% or more a.p.a., pulv. bulk, c.l., East Tampa, Fla	unit-ton	.98	- —
Sweet birch oil, USP, northern, cns	lb	4.00	9.50
USP, southern, cns.	lb	2.00	3.05

T

2,4,5-T dms., c.l. works frt. equald.	lb	1.18	- —
dms, l.c.l. same basis	lb	1.25	- —
2,4,5-T isopropyl ester, dms., c.l. works frt equald	lb	1.24	- —
dms., l.c.l., works	lb	1.29	- —
Talc, dom., fibrous, grd., bgs., c.l., works, New York	ton	28.00	- —
bgs. l.c.l., works	ton	31.00	-36.00
fibrous, 99.5%, 325 mesh, bgs., c.l., works, New York	ton	31.00	- —
bgs. l.c.l., works	ton	34.00	- —
fibrous, 99.95%, 400 mesh, micronized bgs., c.l., works	ton	38.00	- —
625 mesh, micronized, bgs. c.l. works	ton	80.00	- —
ord., Calif., grd., bgs., c.l., works	ton	34.00	-39.50
Vermont, off-color grd., bgs., c.l., works	ton	19.40	- —
bgs., l.c.l., works	ton	37.00	- —
Imp., Canadian, grd. bgs., c.l. mines	ton	20.00	-35.00
Tall oil, crude, dms., c.l., works	lb.	.04½-	.04¾
tanks, works	lb.	.02¾-	.03
Dist., depending on grade, dms., c.l., works	lb.	.07¾-	.10
dms., l.c.l., works	lb.	.08	- .10¼
tanks, works	lb.	.05¾-	.08
Refd., depending upon grade, dms., c.l., works	lb.	.07¼-	.09¼
dms., l.c.l., works	lb.	.07½-	.09¾
tanks, works	lb.	.05¼-	.07¼
Tall oil acids, dms., c.l., works	lb.	.07	- .10
dms., l.c.l.	lb.	.07½-	.10½
tanks, works	lb.	.05	- .08
Tallow, edible, tanks, dlvd.	lb.	.08½-	.08¾
Inedible, fancy, bleachable, tanks,	lb.	.06¼-	.06⅜
fancy, guaranteed, bulk, f.o.b. steamer	lb.	.06¾-	—
dms., f.a.s.	lb.	.07¾-	—
tanks, dlvd.	lb.	.06¾-	—
No. 1, tanks, dlvd	lb.	.05⅞-	.06
prime, tanks, dlvd	lb.	.06	- .06⅛
special tanks, dlvd	lb.	.06	Nom.
sulfonated, 25%, bbls., l.c.l.	lb.	.08½-	.08¾
50%, bbls., l.c.l.	lb.	.10½-	.11
Tallow acids, dist., dms.	lb.	.13¼-	.15¾
tanks	lb.	.10¾-	—
Hydrogenated, dms.	lb.	.14¾-	.17¼
Tallow oil, acidless, dms. c.l.	lb.	.13½	Nom.
dms. l.c.l.	lb.	.14½	.16
Tangerine oil, Florida, dms.	lb.	4.25	- 4.75
Tankage, animal, feeding 9-11% ammonia, New York bulk,	unit-ton	5.25	- 5.75
Tannic acid NF fluffy bbls. 1,000-lb lots	lb	2.05	- —
bbls., smaller lots	lb	2.06	2.07
NF, powd., bbls., 1,000-lb. lots	lb.	1.95	- —
bbls., smaller lots	lb.	1.96	1.99
Tech. dms	lb	1.05	—
Tansy oil, dms.	lb.	6.60	- 8.00
Tar acid oil, 15-18% dms., c.l., frt. equald	gal.	.53½-	—
dms., l.c.l., same basis	gal.	.55½-	—
tanks, same basis	gal.	.43½-	—
25-28% dms., c.l., same basis	gal.	.60	- —
dms., l.c.l., same basis	gal.	.62	- —
tanks, same basis	gal.	.50	- —
50-53% dms., c.l., same basis	gal.	.75	- —
dms., l.c.l., same basis	gal.	.77	- —
tanks, same basis	gal.	.65	- —
Tar, coal (see Coaltar).			
Tartar emetic (see Antimony potassium tartrate)			
Tartaric acid, NF, 100-lb. bgs., c.l., frt. equald	lb.	.41	- —
bgs., 10,000 lbs., 1 shipt., same basis	lb.	.43	- —
bgs., smaller lots, same basis	lb.	.47	- —
Terpine hydrate, NF, cryst., powd., 100-lb. fib. dms	lb.	.70	- —
Terpineol, extra, dms.	lb.	.50	- .60
Prime, dms.	lb.	.40	- .50
Terpinyl acetate, extra, cns., dms.	lb.	.64	- .75
Prime, dms.	lb.	.53	- .56
Terpinyl propionate, dms.	lb.	1.75	3.00
Terra alba (see Gypsum).			
Testosterone, USP, bots.	gram.	No prices.	
Testosterone proprionate, USP bots.	gram.	No prices.	
Tetrachloroethane, dms. works	lb.	.14½	—
Tetrasodium pyrophosphate (see Sodium pyrophosphate)			
Tetrachloroethylene, tech (see Perchloroethylene)			
Tetrachloroethylene, USP, 55-gal. dms., c.l., t.l., works	lb.	.20½-	—
dms., l.c.l., works	lb.	.22	.23½
Tetraethyl orthosilicate, dms., c.l., dlvd. E	lb.	.60	- —
dms., l.c.l., dlvd. E	lb.	.61½-	—
Tetraethyl pyrophosphate, 40%, cns., dms. frt equald	lb.	.75	- —
Tetraethylenepentamine dms., c.l., dlvd E	lb.	.53½-	—
dms., l.c.l., dlvd. E.	lb.	.55	- —
tanks, dlvd E.	lb.	.51	- —
Tetraethylthiuram disulfide, tech., dms., frt alld	lb.	1.04	- —
Tetrahydrofuran, dms. c.l., t.l., works	lb.	.36½-	—
dms., l.c.l., or t.t.l., works	lb.	.37	- —
tanks, works	lb.	.35	- —
Tetrahydrofurfuryl alcohol, dms., c.l., t.l., Memphis, Tenn.	lb.	.31½-	—
dms., l.c.l., Memphis, Tenn	lb.	.32½-	—
dms., c.l., t.l., Newark, N.J	lb.	.33½-	—
dms., l.c.l., Newark, N.J	lb.	.34½-	—
tanks, dlvd E. of Denver	lb.	.31	- —
tanks, dlvd W. of Denver	lb.	.32	- —
Tetrahydrophthalic anhydride, dms., c.l., t.l., frt. alld. E	lb.	.39	- —
l.c.l., l.t.l., same basis	lb.	.41	- —
Tetrapotassium phosphate (see potassium phosphate)			
Thallium metal, dlvd	lb	7.50	-10.00
Thallium sulfate, 99% bots., dlvd.	lb	5.00	-10.00
Theobromine, NF, fib. dms., 100-lbs., f.o.b., works	lb.	4.40	- 4.75
Theobromine and sodium acetate, USP, fib. dms., 500-lbs. works.	lb.	6.45	- —
Theobromine sodio-salicylate, NF, fib. dms., 500-lbs., works	lb.	3.80	- —
Theophylline, USP, anhyd. 100-lb. dms., frt. alld	lb.	3.65	- —
Thiamine hydrochloride, USP, fib. dms., frt. alld	kilo.	36.00	- —
USP, ampule grade, fib. dms., frt. alld	kilo.	38.00	- —
Thiamine mononitrate, USP, fib dms., frt. alld	kilo.	36.00	- —
Thiocarbanilide, dms., ton lots	lb	72	- —
dms., less ton lots	lb	74	- —
Thiodiphenylamine (see Phenothiazine).			
Thioflavin green toner, brilliant, molybdated, PMA, bgs., works	lb	5.20	- —
Tungstated, PTMA, bgs. works.	lb.	6.20	- —
Thioglycolic acid, refd., 55 gal. dms., ton lots, 100% basis	lb.	1.15	- —
Thiosalicylic acid, 80%, dms., 1,000-lb., lots, works	lb.	4.00	- —
Thiourea, tech., bgs., t.l. frt. alld.	lb.	.30	- —
bgs., ton lots, same basis	lb.	.32	- —
bgs., less than ton lots, same basis	lb.	.33	- —
Thorium nitrate, purif., fib dms., 100-lb. lots or more, works	lb	3.50	- —
dl-Threonine, bots., 1-kilo lots	kilo.	275.00	- —
Thyme leaves, French, bgs	lb	.29	- —
Spanish, bgs.	lb.	.14	- —
Thyme oil, NF, red, cns., dms	lb.	1.90	- 2.25
NF, white, cns	lb.	2.20	- 2.60
Tech. white cns	lb	.40	1.85
Thymol, fib. dms., 25-lbs., f.o.b. works.	lb.	3.06	- —
Thymol iodide, NF, dms., 100-lbs. f.o.b. works	lb.	7.40	- —
Timbo root (see Cube root).			
Tin chloride (see Stannous chloride, anhyd.)			
Tin crystals (see Stannous chloride, hydrous)			
Tin metal (Straits)	lb.	.99	- —
Tin oxide (see Stannic oxide)			
Tin sulfate (see Stannous sulfate).			
Tin tetrachloride anhyd (see Stannic chloride anhyd.)			
Titanium dioxide, anatase, ceramic, bgs., c.l., dlvd	lb.	.25½-	—
bgs., l.c.l., dlvd	lb.	.26½-	—
reg., bgs., c.l., dlvd	lb.	.25½-	—
bgs. l.c.l., dlvd	lb.	.26½-	—
metallurgical, nat., bgs., c.l., f.o.b. Jacksonville, Fla	ton.	180.00	- —
bgs., 5-ton lots, Niagara Falls, N.Y	ton.	205.00	- —
bgs., ton lots, same basis	ton.	215.00	- —
Milled metallurgical titanium dioxide $7.50 per ton higher.			
Titanium dioxide, rutile, non-chalking, bgs., c.l., dlvd. E.	lb.	.27½-	—
bgs., l.c.l., dlvd. E	lb.	.28½-	—
Titanium dioxide-calcium pigment, 30% TiO_2, reg., bgs., c.l., dlvd	lb.	.09¾-	—
bgs. l.c.l., works	lb.	.09⅞-	—
50% TiO_2, high-tinting, dms. c.l.	lb.	.14⅜-	—
dms., l.c.l.	lb.	.14⅞-	—
Titanium hydride, powd., dms., works	lb.	8.10	- 9.00
Titanium tetrachloride, tech., dms., c.l., works	lb.	.26	- —
dms., l.c.l., works	lb.	.27½-	.29
tanks, works	lb.	.20	- —
Tobias acid, dms., c.l., t.l.	lb.	.78	- —
dms., l.c.l.	lb.	.81	- —
d-a Tocopherols, NF, mixer, conc., pure basis, bots	kilo.	67.00	- —
d-a-Tocopheryl acetate, NF, conc., pure basis, bots	kilo.	122.00	- —
d-a-Tocopheryl acid succinate, cryst., bots	kilo.	109.00	- —
dl-a-Tocopherol, bots	kilo.	99.00	- —
d-a-Tocopheryl acetate, bots.	kilo.	90.00	- —
25% dry, powd., bots.	kilo.	22.50	-24.00
33⅓% dry, powd., bots.	kilo.	30.00	-31.50

Nosey,
The Esso Solvents Expert, licks a pinholing paint problem with SOLVESSO®
The foreman had problems. Paint pinholed, blistered and pimpled. Those surface coatings looked terrible!
Esso
GLOOM!
I told him that SOLVESSO could help relieve these production headaches by controlling the evaporation better.
'Sounds great', he said. (He was also glad to learn that Esso is a pioneer in better odor solvents —and that Esso has a staff of experts in its refineries dedicated to the continuing improvement of solvents.)
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Just look at this lustrous finish... helped by SOLVESSO. For fast, dependable service (and quality solvents)—contact your nearest Esso office. (And tell 'em Nosey sent you!)
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ESSO STANDARD,
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In industry after industry... "ESSO RESEARCH works wonders with oil"

o-Tolidine base, dry, kgs., 100% basis lb 1.55 - —
Paste, kgs., 100% basis lb 1.50 - —

TOLUOL
Toluol quotations, both coaltar and petroleum, may be found under Toluene.

o-Tolidine, hydrochloride paste, kgs., 100% basis lb 1.50 —
Tolu balsam, cns. lb. 3.00 - 3.25
Toluene, coaltar, indust. or nitration tanks, dlvd E of Rockies gal. .25 - —
Toluene, petroleum indust. tanks, dlvd E. of Rockies gal. .25 - .32
p-Toluenesulfonamide powd., dms., t.l., works lb. .60 - —
dms., l.t.l., same basis lb. .63 - —
Toluenesulfonic acid, 55-gal. dms., t.l., frt. alld lb. .16 - —
1,000-lb. or more, same basis lb. .18 - —
less than 1,000-lb., same basis lb. .23 - —
tanks, same basis lb. .14 - —
Toluenesulfonic acid in 10-gal. dms., 2c. per lb. more.
p-Toluenesulfonic acid monohydrate, dms., c.l. or t.l. lb .90 - —
dms., 125 lbs to t.l. lb 1.00 - —
m-Toluidine dms. c.l. works, frt. alld lb. .83 - —
dms., l.c.l., same basis lb. .84 - —
tanks, same basis lb. .82 - —
o-Toluidine dms. c.l., works, frt. alld lb. .30 - —
dms., l.c.l., same basis lb. .31 - —
tanks, same basis lb. .28 - —
p-Toluidine tech. flake, dms., frt. alld lb. .50 - —
Cast, dms. frt. alld lb. .45 - —
p-Toluidine-m-sulfonic acid, dms., works lb. .92 - 1.04
Toluidine red toner, deep shades, kgs. works lb 1.70 - —
Light shades, kgs. works lb 1.70 - —
2,4-Tolylenediamine, cryst., tib, dms., l.c.l. frt alld lb 1.10 - —
Tonka beans, Angostura, cks. lb. 1.50 - —
Brazilian, Surinam, cs. lb. 1.30 - —
Totaquine, 100-oz. lots, ens. oz. .42 - —
Toxaphene dms. c.l. t.l., works lb .22 - —
dms., l.c.l., t.l.c., works lb. .28 - —
Tragacanth gum, No. 1, ribbons, cs lb. 3.85 - 3.90
No. 2, cs lb. 3.40 - 3.60
No. 3, cs lb. 3.15 - 3.25
USP, powd., bbls. lb. 1.05 - 1.15
Triacetin dms., c.l., dlvd. E. of Rockies lb. .39 - —
dms., l.c.l., same basis. lb. .40 - —
tanks, same basis. lb. .37 - —
Triallylamine, dms., c.l., dlvd. lb .985 - —
dms., l.c.l., dlvd. lb. .995 - —
tanks, dlvd. lb. .96 - —
Tributyl citrate, tech., non-ret. dms., c.l., frt alld E of Denver, lb. .42½ - —
non-ret. dms., l.c.l., frt. alld. E. of Denver lb. .43½ - —
tanks, frt. alld E of Denver lb. .40 - —
Tributyl phosphate, dms. c.l., works. lb. .52½ - —
dms., l.c.l., same basis. lb. .53½ - —
tanks, same basis. lb. .50 - —
Tributylamine dms., c.l., works lb. .67½ - —
dms., l.c.l., same basis lb. .69 - —
tanks, same basis lb. .65 - —
Tributyrin, dms., l.c.l., dlvd. lb. .69 - —
Trichloroacetic acid, bots. lb. 2.00 - 2.50
Trichlorobenzene, dms., c.l., frt. alld. E lb. .15 - —
dms., l.c.l., frt. alld. E. lb. .16 - —
tanks, frt. alld. E. lb. .13¼ - —
Trichlorobenzene prices in the West 1¾c. higher.
1,1,1-Trichloroethane, dms., c.l., dlvd. lb. .13¼ - —
dms., l.c.l., dlvd. lb. .13¼ - —
tanks, dlvd. lb. .12¼ - —
1,1,2-Trichloroethane, dms., c.l., works lb. .13½ - —
dms., l.c.l., dlvd. E. lb. .14¼ - —
tanks, works lb. .11½ - —
Trichloroethylene, dms., c.l., or t.l., dlvd lb. .14 - —
dms., l.c.l., dlvd. lb. .15¼ - —
tanks, dlvd. lb. .12¾ - —
Trichloroisocyanuric acid, dms., c.l., t.l., frt. equald lb. .65 - —
dms., l.c.l., same basis lb. .75 - —
Trichlorophenoxyacetic acid (see 2,4,5-T).
Tricholine citrate, 65% soln., ret. ebys., works, frt. adjusted. lb. 1.40 - 1.45
Tricresyl phosphate, coaltar, dms., c.l., dlvd lb. .35 - —
dms., l.c.l., dlvd. lb. .36 - —
tanks, dlvd. lb. .32½ - —
Tricresyl phosphate, petroleum, dms., c.l., dlvd lb. .34½ - —
dms., l.c.l., dlvd. lb. .35½ - —
tanks, dlvd. lb. .32½ - —
Tridecyl alcohol, mixed isomers, dms., c.l., dlvd. E lb. .26½ - —
dms., l.c.l., dlvd. E lb. .28 - —
tanks, dlvd. E lb. .24 - —
Triethanolamine dms. c.l., dlvd E. lb. .24½ - —
dms., l.c.l., same basis lb. .26 - —
tanks, same basis lb. .22 - —
Triethanolamine lauryl sulfate, dms., c.l., t.l., frt. alld lb. .25½ - —
dms., l.t.l., frt. alld. lb. .26½ - —
tanks, frt. alld lb. .24½ - —
Triethylamine, dms., c.l., dlvd. E. lb. .50 - —
dms., l.c.l., same basis lb. .51½ - —
tanks, same basis lb. .47½ - —
Triethyl citrate, refd., tech., non-ret. dms., c.l., frt alld E. of Denver lb. .46¼ - —
non-ret. dms., l.c.l., frt. alld. E. of Denver lb. .47¼ - —
tanks, frt. alld. E. of Denver lb. .43¼ - —
Triethyl phosphate, dms., c.l., dlvd. lb. .40½ - —
dms., l.c.l., dlvd. lb. .41½ - —
tanks, dlvd. lb. .38 - —
Triethylene glycol, dms., c.l. dlvd. E lb. .21 - —
dms., l.c.l., dlvd. E. lb. .22½ - —
tanks, same basis lb. .18½ - —
Triethylenetetramine, dms., c.l., dlvd. E lb. .51¼ - —
dms., l.c.l., dlvd. E. lb. .53 - —
tanks, dlvd. E. lb. .49 - —
Triisobutylene, tanks, dlvd lb. .08 - —
Tri-isopropanolamine, dms., c.l., dlvd. E lb. .23¼ - —
dms., l.c.l., dlvd. E. lb. .24¾ - —
tanks, dlvd. E. lb. .20¾ - —
Trimethylamine, anhyd., cyls., l.c.l., frt. equald, 100% basis lb. .30 - .305
tanks, frt. equald, 100% basis. lb. .26 - —
25-40% soln., dms., c.l., frt. equald, 100% basis lb. .35 - —
dms., l.c.l., frt. equald, 100% basis. lb. .35¼ - —
tanks, 100% basis, frt. equald lb. .26 - —
Trimethylolpropane, dms., c.l., t.l., dlvd. E lb. .33 - —
dms., l.c.l., l.t.l., same basis lb. .36 - —
Trioxane, pure, dms., c.l., t.l., works. lb. .50 - —
dms., l.c.l., works lb. .51½ - —
Tripentaerythritol, bgs., c.l., t.l., dlvd. E lb. .40 - —
bgs., l.c.l., l.t.l., dlvd. E. lb. .41 - —
Triphenyl phosphate, bbls., c.l., frt equald lb. .41½ - —
bbls., l.c.l., frt. equald lb. .42½ - —
Triphenylguanidine, bbls., works lb. 90 - —
Tripropylene, dms., c.l., dlvd. E gal. .44 - —
dms., l.c.l., same basis gal. .54 - —
tanks, same basis gal. .28 - —
Tripropylene glycol dms., c.l., t.l., frt. alld. E lb. .20½ - —
dms., l.c.l., l.t.l., frt. alld. E lb. .22 - —
tankcars and compartmented tankcars, frt. alld. E lb. .17½ - —
tankwagon and compartmented tankwagons, 1,000 gals. min., frt. alld. E lb. .18 - —
Tripropylene glycol prices 1c. per lb. higher in West.
Trisodium phosphate (see Sodium phosphate tribasic).
dl-Tryptophane, fib., dms., works. lb. 55.00 - —
Tung oil, dms., c.l., New York lb. .24 - —
dms., l.c.l., New York lb. .24½ - —
tanks, imported, N. Y. lb. .22 - —
tanks, domestic, mills lb. .21¾ - .21½
Tungsten metal, powd., 2.0-2.5 microns, dms., works lb. 4.25 - —
Tungstic acid, tech., dms., 1,000-lb. lots, works lb. 2.25 - —
dms., smaller lots works lb. 2.45 - —
Turkey red, bbls. works lb. .62 - —
Turpentine, gum (see Protective Coatings market, Naval Stores).
Turpentine oil, NF, cns. gms lb. .28 - .50
Tuscan red, bbls. frt. equald lb. .26 - .32
Tyrothricin, USP, 1 to 5 kilos gram. .54 - —

U

Ultramarine blue, cobalt type, dry or pulp, 250-lb. bbls., dlvd. E of Rockies lb. .35 - .39½
Jobbing types, bbls., same basis lb. .19 - —
Regular types, dry, bbls., same basis lb. .22½ - .35
Ultramarine blue prices 1c. higher W. of Rockies.
Umber pigment, burnt, American, bgs., c.l., works lb. .07½ - .07¾
bgs., l.c.l. works lb. .07¾ - .08
Burnt, turkey-type, bgs., c.l., Boston, Bethlehem, Easton, Pa., Hiwassee, Va., N. Y. lb. .08¼ - —
Raw, American, bgs., works lb. .07¾ - .08¼
Turkey-type, bgs., works lb. .08½ - .08¾
Undecylenic acid, dms. lb. 1.28 - —
Unicorn root, false (see Helonias root).
Unicorn root, true (see Aletris root).
Urea, 46% N, indust., bgs., c.l. t.l., dlvd E ton 125.00 - —
bgs., l.c.l., dlvd E ex whse ton 145.00 - —
45% N, agricultural, bgs., c.l., (30 tons) dlvd E ton 103.00 —
Urea-ammonia liquor A, B, C & F grades, N basis, tanks, frt. equald ton 120.00 - —
37 grade tanks same basis ton 145.00 —
Urethane, USP, dms. t.l., f.o.b. works lb 65 - —
dms., l.t.l., same basis lb 70 - —
Uva-ursi leaves, bls. lb 12 - —

V

Valerian root, Belgian, bgs. lb. .32 - —
Indian, bgs. lb 25 —
dl-Valine, dms. works lb. 21.00 - 27.50
Vanadium pentoxide, tech., dms., works lb 1.28 - 1.33
Vandyke brown, bbls. works lb .09½ - .12
Vanilla beans, Bourbon, tins lb. 14.25 - —
Mexican, cuts, tins lb. 14.25 - —
whole, tins lb. 14.75 - —
Vanillin, ex lignin, 100-lb. fib. dms., 1,000-lb. lots or more lb 3.00 - —
100-lb fib. dms., 500-lb lots lb 3.10 - —
100-lb. fib. dms., cns. 100-lb. lots lb 3.25 - 3.35
Venetian red, jobbing, bgs., works. lb .0475 —

—Continued on page 71

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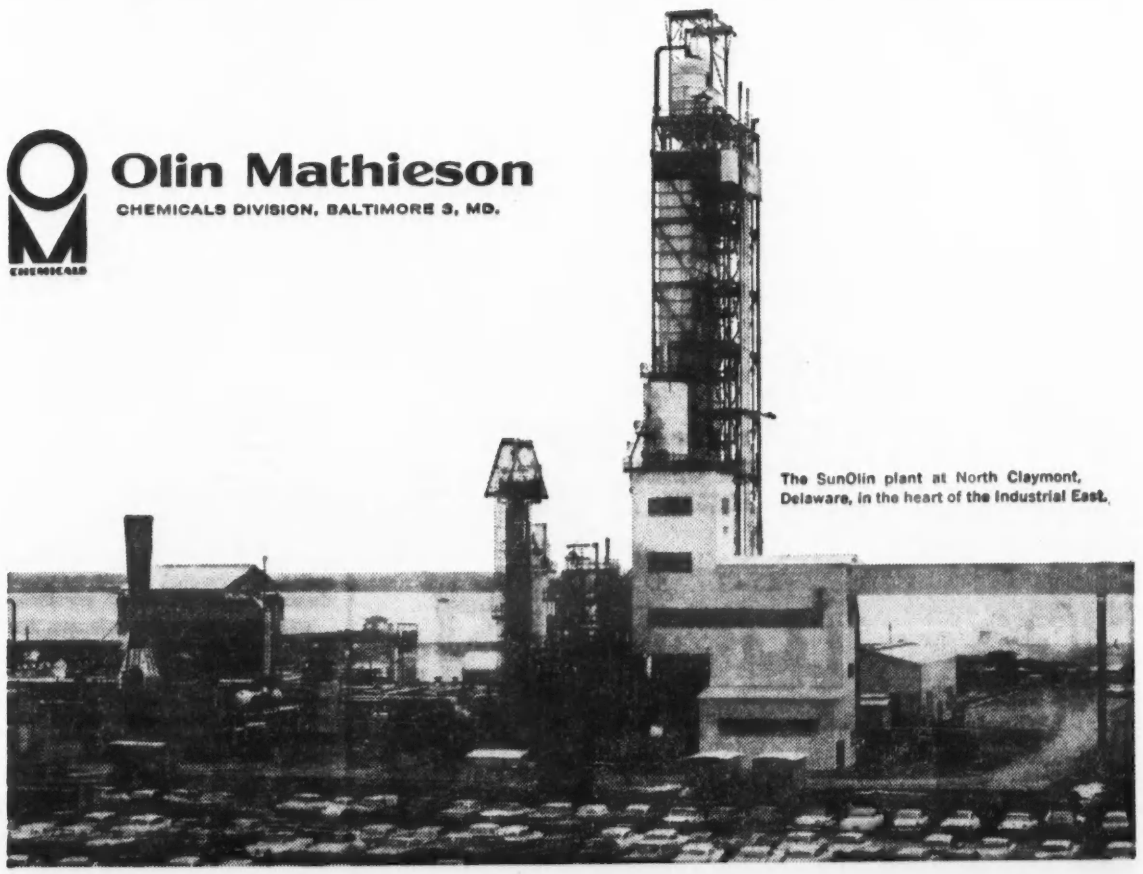

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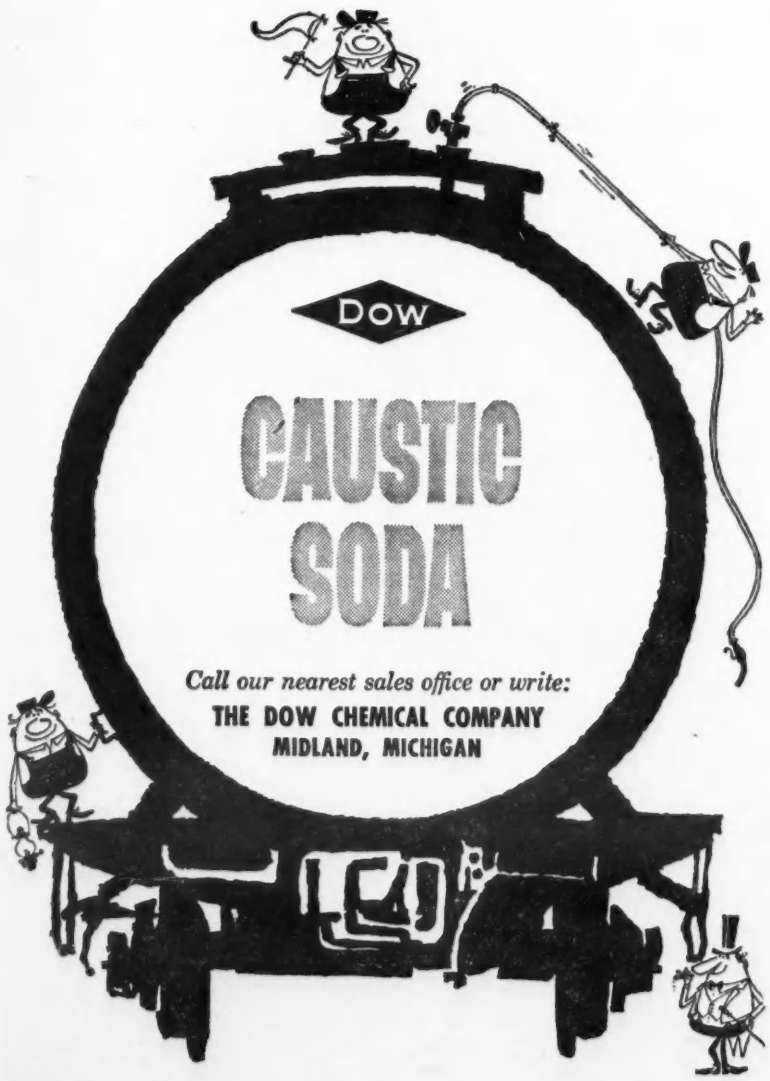

Heavy Chemicals

Pulse of industry quickened. Steel output was estimated at 2,305,000 tons, 80.9 percent of capacity, a heartening two beats ahead of the rate a week earlier. Copper sulfate output gained five percent in February, hitting 3,500 tons. Hot off the wire from Aluminum Association, figures for the light metal's performance in March reveal output in hailing distance of an all-time record high. Also higher were lime sales, spurred by the upturn in steel; also HF and sulfuric acid, flayed by the same source.

Chlorine could hardly lag long amid such widespread revivification.

Holding that alkali back a brief spell was the rafter high inventory of consumer stocks piled ahead of the second-quarter price advance. Those stocks long gone, consumers have turned up full throttle on peak season orders, reports in the trade indicate.

Buzzing along are sales of lead, mercury, tin. Nor is zinc holding back.

The American Paper and Pulp Association reported production for the week ended April 16, at 97.0 percent of theoretical capacity as compared with the revised figure of 96.6 percent for the previous week and 95.8 percent for the corresponding week of last year.

Price Trends

Advanced
None

Reduced
None

Comparative Price Indexes
(100=1949 average)

Last week	Prev. week	Last month	April 24, 1959
106.88	106.87*	106.84	104.84

* Revised.

For Current Prices See Page 11

Acids

Hydrochloric — Producers were unanimous last week in reporting a good market for this acid, and word from consumers had it that they would be needing sizable shipments right down to the finish line of this spring producing season.

Supplies, reports from the trade indicate, are about adequate to take care of needs, with a small amount, about enough to meet demand for two weeks in the event that production should suddenly halt (an unlikely event), remaining at the end of each month's activity.

Output was trimmed by an insignificant amount in February according to this month's report from the Census Bureau. Producers turned out 90,618 tons of the acid, says Census, as against 94,880 in January. Stocks stood at 38,267, down from 42,333 a month earlier, proving that the consuming end of the market had kept humming along.

Hydrofluoric—Interestingly, the aluminum industry's troubles, if indeed it's having any troubles (there seem to be a variety of opinions on this question) have made no difference to HF. For the light metal makers are turning out massive amounts of the light metal, and absorbing equally massive shipments of HF in the process, irrespective of any downward shift that may be noted in sales.

Nitric—Output totaled 280,709 tons in February, off a shade from January's 287,981 tons, with stocks closing the month at 17,985 tons, as compared with 18,595 a month earlier, reports Census Bureau.

Sulfuric—For those who have been watching the steel production graph with more than academic interest, there's heartening news from American Iron & Steel Institute. The Institute estimates last week's steel output at 2,305,000 tons, or 80.9 percent of capacity, up (finally up) from the previous week's actual total of 2,225,000 tons, or 78.1 percent of capacity.

For background, the Institute digs into its archives and notes that output a month ago was running at 2,597,000 tons, and a year ago at 2,646,000 tons.

To focus on sulfuric acid itself (much of which, however, goes into steel pickling), Census Bureau reports output of acid at 1,501,378 tons in February, down so little that it hardly mattered from January's 1,589,402 tons, with stocks at month's end standing at 537,797 tons, down significantly, indicating sustained consumption, from 573,432 tons a month earlier.

Bases and Salts

Caustic Soda—Water treatment needs are brisk, industrial outlets no less so, reports in the trade indicate. No price action is expected in the nearby picture despite chlorine's recent advance.

Chlorine—Its price advance brought a brief market sag for chlorine, which proved harmless, as it was only the complementary motion in a turn that began with consumers stocking massively ahead of the hike, trade sources report. Business right now is at or near a seasonal peak, they add. Supplies, it is further noted, about suffice to meet needs and still retain a margin for a rainy day.

Copper Sulfate — February output of this chemical totaled 3,500 tons, up five percent from January and the largest since June 1959, reports the Bureau of Mines.

Shipments, however, at 3,200 short tons, were virtually unchanged from the previous month. Being 300 tons smaller than production, they caused stocks to climb fifteen percent. The latter were said to suffice, at the February rate of shipments, for almost one month's requirements.

Lime—Sales of this item soared to 981,898 short tons in February, up from 713,493 the previous month, reports the Bureau of Mines. The figure included 787,733 tons of quicklime and 194,165 tons of hydrated. By end-use pattern, sales were 7,659 tons of agricultural lime, 66,995 of construction material, 684,060 for chemical and other industrial uses, and 223,184 for refractory (dead-burned dolomite).

Making comparisons on a yearly basis, Mines notes that output for January-February 1960 totaled 1,955,557 short tons, up sharply from 1,416,076 in the comparable two-month period of 1959.

Sulfur—The following figures, compiled by the Bureau of Mines, show production and shipments of sulfur during specified periods:

	Feb.	Jan.
Native production	366,357	388,630
Shipments	377,626	351,267
Sales*	400,727	352,584
Stocks†	3,811,384	3,845,754
Recovered production	57,546	54,907
Shipments	60,981	59,103
Stocks†	131,466	133,860

* Calculated from production and change in stocks during the period.

† Producers' stocks at mines or plants in transit, and in warehouse at end of period.

The following figures, compiled by the Bureau of Mines, show imports of Canadian and Mexican sulfur into the United States during specified periods in long tons.

	Jan.	Dec.
Ore	2,395	1,118
In any form	82,775	34,070
Total	85,170	34,188
Dollar Value		
Ore	$55,595	$25,709
In any form	1,698,892	734,155
Total	$1,754,487	$759,864

Nonferrous Metals

Aluminum—To begin with the latest figures, hot off the wire from the aluminum Association, production sales of the light metal in March is tabbed at 170,658 tons, a long-legged and much needed stride ahead of February's skimpy 156,826 tons. To prove how well the production end of the market has recovered with this development, it is only necessary to note that production last March totaled only 157,189 tons.

Moreover, the March total was heard in hailing distance of the all-time record 179,194 tons produced in July 1959.

It will be interesting to see, when figures are available, how well sales managed to measure up to this blithely upward production pace.

Turning to the archives of the Bureau of Mines:

Primary aluminum production in the US amounted to 164,023 short tons in January, up slightly from the previous month's figure, according to word from the Bureau. The total represented about 83 percent of plant capacity.

Shipments of the light metal, adds the Bureau, reached 148,000 tons, down a steep 36,000 tons from the December total. Declining shipments and sustained high production made for a 14 percent increase in stocks, notes the Bureau.

Considered worthy of note by the Bu-

Heavy Chemicals

reau in its report was the fact that a loan of $13.6 million was approved by the Export-Import Bank for construction of an aluminum reduction plant in India. The plant will include an alumina installation and a 20,000 metric ton per year reduction plant. Estimated capital cost is $30 million.

Copper—Primary copper production in the US in March totaled 107,995 short tons, up from 85,899 the previous month, according to the Copper Institute. Refined output was at 129,758 tons, as against February's 105,417 tons. Deliveries to fabricators totaled 122,752 tons, or 3,960 per day, as compared with 111,851 tons, or 3,857 per day, a month earlier.

Production of primary copper outside the US in the same month amounted to 199,784 tons, up from 185,866 tons in February, and refined output reached 172,195 tons, up from 164,535 tons. Deliveries to fabricators, the Institute reports, totaled 181,723 tons, or 5,862 per day, as against 168,805 tons, or 5,821 per day, the month before.

Magnesium—Commercial output of primary magnesium totaled 10,055 tons in the first quarter of this year, according to the Bureau of Mines. This was a rise of eight percent over the last fourth quarter, and an eyeball-rolling 82 percent gain over the industry's first-quarter 1959 performance.

Mercury—Market ambled along, prices holding unchanged at a range of $215 to $217 a flask, for large lots, spot shipment, the range reflecting quantity.

Silver—Sales sailed along smoothly at a price long pegged at 91 3/8c. a troy ounce, in the spot market.

Tin—Whirling down a steady groove, the tin market featured an unchanged price tag of 99c. a pound, Straits metal, spot, Friday.

Berk Signs on Velsicol To Sell New Chemical Line

F. W. Berk & Company, Inc., Wood-Ridge, N. J., has apponted Velsicol Chemical Corporation, Chicago, as sales agent, effective May 1, for a new line of agricultural and industrial products.

Production of the new materials—tradenamed "Nabam," "Zineb," and "Thiram"—is slated to start up sometime this week.

Velsicol will sell the materials through its agricultural and industrial sales divisions. Foreign sales will be handled by Velsicol International Corporation, S.A., Nassau, Bahamas, B.W.I.

Tube Company Appoints

Paul J. Selinger has been appointed assistant general sales manager for Standard Tube Company, Detroit, Mich. Mr. Selinger has been with Standard Tube for six years as manager of stainless sales and manager of product development.

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Jobs & People

Abbott Laboratories, North Chicago, Ill.—**Edward P. Brandes** has been appointed head of scientific relations responsible for contacts with federal and state regulatory agencies.

American Agricultural Chemical Company, New York — **Robert D. Weldon** has been appointed manager of turf and garden fertilizer sales.

Antara Chemicals, a sales division of General Aniline & Film Corporation, New York—**Frederick W. Morgart, jr.,** has been taken on by the company as sales engineer in charge of operations in the Minneapolis-Minnesota area.

Archer-Daniels-Midland Company, Minneapolis, Minn.—**Allan E. Peyer** goes to ADM as assistant to the vice-president and director of marketing.

Catalin Corporation of America, New York—**Howard Wood** has been named sales engineer in the resins division.

Cleveland Paint & Color Company, a subsidiary of Pratt Lambert Company, Cleveland, Ohio — **C. F. Hromadka,** has been elected president.

Colgate-Palmolive Company, New York — **Carl G. Strub** has been named administrative manager of the company's corporate research and development department. He will supervise planning, coordination and direction of services at the new Colgate Research Center to be built at New Brunswick, N. J.

Delhi-Taylor Oil Corporation, Dallas, Tex.—**Carroll C. Cook** has been named project manager in the special projects and planning department. He was formerly assistant to the senior vice-president.

Dow Chemical Company, Midland, Mich.—Ten veteran salesman have been advanced to the new positions of account managers. They are: **Russell W. Haeger** and **Douglas H. MacIntosh,** both with the chemicals sales staff, Detroit, Mich., office; **William M. Jackson,** plastics, Atlanta, Ga., office; **Theodore G. Moore,** chemicals, Minneapolis, Minn., office; **Herbert A. Townsley,** chemicals, Charlotte, N. C., office; **James C. Wheeler,** chemicals, Houston, Tex., office; and **Denis J. Mullins, Stanton D. Smith, Frank J. Ward** and **Henry B. Weisl,** all with plastics sales in the New York office.

Fleuroma, Inc., New York—**Thomas F. LaPrelle** has been appointed to the metropolitan New York sales staff, covering the eastern seaboard area around that city.

Gagliardi Research Corporation, East Greenwich, R. I.—**Vincent T. Elkind,** organic research chemist, has joined the company as senior research associate. He was previously with Rohm & Haas Company and International Packing Corporation.

General Aniline & Film Corporation, New York—**Albert B. Phelan, jr.,** has been appointeu sales representative, and **Rene C. Morin** technical representative for the New England leather industry as part of a campaign to expand and develop sales in that area.

McNeil Laboratories, Inc., Philadelphia—Six executives have been elevated to vice-presidencies. They are **Edward J. Heines,** manufacturing; **John Hogan,** advertising and promotion; **Charles F. Kade, jr.,** research; **David S. Lamont,** sales; **Robert L. Leininger,** vice-president and secretary; and **Dr. James M. Shaffer,** vice-president and medical director.

Monsanto Chemical Company, St. Louis, Mo. — **Frederick C. Ernest,** now a research chemist in the organic chemicals division, has been appointed to the college recruiting staff of the personnel and administrative services department, effective about August 1, 1960.

Schieffelin & Co., New York — **Edmund Mendell** has been named plant superintendent.

Union Carbide Plastics Company, New York, a division of Union Carbide Corporation—**Gerrit V. Lydecker** has been appointed assistant regional manager in the New England territory.

Wyeth Laboratories, Philadelphia —**Dr. Howard Tint,** has been named director of product development.

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Koppers to Raise Polyethylene Capacity

—Continued from page 3

1955, he had predicted earnings of $6 per share in 1960. He spent a few moments explaining why this did not happen, outlining three basic reasons:

• Koppers at that time did not include allowances for declines in prices of chemicals and plastics, when it programmed ahead for five years.

"Had prices stayed the same," Mr. Foy revealed, "it would have meant $18.8 million more in sales, equivalent to about $3 per share."

• Koppers in its five-year forecast made in 1955 did not predict, or allow for, a recession in 1958. This set back growth progress.

• In 1955, Koppers was optimistic about its new chemical manufacturing operations. "We felt," said Mr. Foy, "that we could start new plants quickly, despite warnings of the old-timers in the industry."

However, the new plants didn't start so quickly. The Port Arthur plant took twenty-four months to get into the black, Mr. Foy indicated. And the Port Reading, N. J., plant, which has been running in the red for twenty-four months, is expected to take a few more months to turn the corner.

One result of the five-year planning: Koppers has cut back its planning programs from five to three years. "Up to three years you can forecast fairly accurately," Mr. Foy said. "But those extra two years are pretty much blue sky."

Koppers will earmark from $15 to $25 million annually during the next three years for capital investment, Mr. Foy indicated. Chemical investment in research and development alone will average about 4 percent of sales.

Further, Koppers intends to sink some $10 million over a three-year period into its overseas operations. The company is now on tenterhooks awaiting a government decision to lend Turkey some $100 million.

Reason: Koppers, along with Blaw-Knox Company and Westinghouse Electric Company, are partners in a steel mill engineering venture in Turkey, and all that's needed is capital.

Koppers is also pushing its Strategic-UDY direct ore reduction furnace for the steel industry, and has come up with a 4,000-ton a day forty-pound-per-square-inch blast furnace which looks very promising.

This latter, while the initial cost would be higher, would save steel producers an estimated $2.5 million a year, since, among other factors, it is capable of doubling throughout. Current blast furnaces are rated at ten pounds per square inch.

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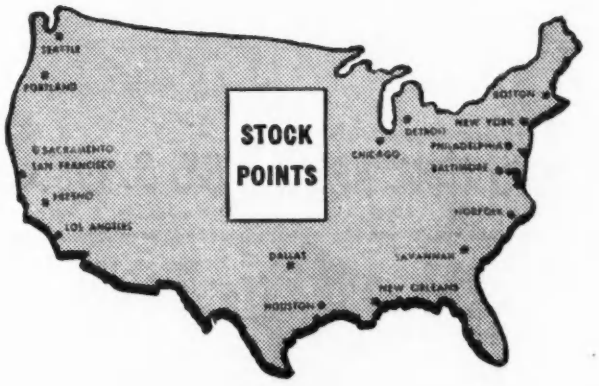

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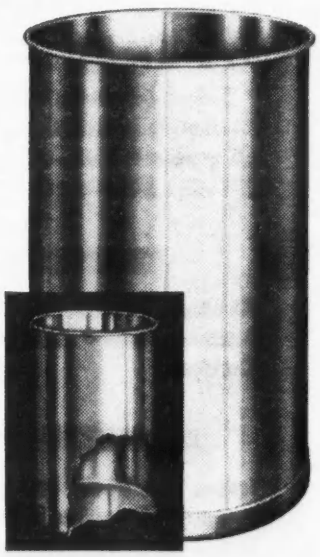

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Witco Chemical Company has issued a brochure listing its complete line of "Emcol" **surface - active agents.** Copies are available upon request to the company at 122 East 42nd street, New York 17. Uses are classified under the headings: Agricultural emulsifiers, cosmetics, detergents, cleaners, emulsion cleaning and emulsion degreasing, dry-cleaning detergents, emulsifiers, sludge dispersants in oils and solvents, and wetting and dispersing agents.

Foster D. Snell, Inc., has issued a booklet on the "Evaluation of Architectural and Decorative Materials." Copies are available from the company's client relations department at 29 West 15th street, New York 11. The booklet describes the various tests available for **structural plastics and other building materials.**

United Lacquer Mfg. Corporation offers a color card of **industrial finishes** from its office at 1001 West Elizabeth Avenue, Linden, N. J. Shown are some sixty-four shades available in lacquers, synthetics, vinyls and specialty finishes in a broad scale of lusters at six levels. Detailed descriptions of each finish are included.

Arapahoe Chemicals, Inc., has issued its 1960 "Domestic Price Catalog," listing some forty different **fine and organic chemicals.** Copies are available from the company's home office at 2800 Pearl street, Boulder, Colo.

Heyden Newport Chemical Corporation has just issued a technical bulletin on "Pentalube TP-653-B" **high temperature synthetic lubricant,** which has been qualified for use under the Air Force's newly-issued specification, MIL-9236-B. Copies are available from the company's market development department at 342 Madison avenue, New York 17.

International Epoxy Corporation has issued a thirty-two page handbook of "Application Methods" for its line of **epoxy concrete adhesives.** Copies are obtainable without charge by writing the company at 501 N. E. 33rd street, Fort Lauderdale, Fla. Featuring field tested application methods, the handbook details surface preparation, equipment requirements, mixing procedures, and the curing and use of solvents in the adhesives.

Sonneborn Chemical & Refining Corporation has issued a bulletin on **white mineral oil** for controlling the growth of the tobacco "sucker." Copies are available from the company at 300 Park avenue south, New York 10. Recent tests described in the bulletin are said to indicate that emulsions of white mineral oil can effectively prevent the growth of axillary buds on tobacco plants. Application and test data received from state agricultural experiment stations are included.

Walker Chemicals, Inc., has issued a current list of **"Alkaloids and Fine Chemicals,"** available from its offices at 22 First street, Mt. Vernon, N. Y. The company is exclusive US sales agent for T. H. Smith, Ltd., Edinburgh, Scotland.

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Aliphatic Organics

Not even a wee bit of ethyl alcohol was imported in 1958. Only 3,148,505 gallons in 1957 and a mere 540,000 gallons in 1959. Knowing this, one may logically ask why imports suddenly shot up to 4,262,791 gallons during the first two months of 1960, more than the grand total for the three previous years combined. Given this question last week, trade people, feeling there was no one, simple answer, naturally resorted to speculation. This turned up the following possibilities: (1) Firms importing were (are) short on alcohol; (2) they wanted to upgrade the stuff to higher-priced, more profitable derivatives, such as butanol, also short; (3) they were hurting for raw materials or channeling same to other end-items — ethylene to polyethylene and styrene rather than to ethyl alcohol, for example; and (4) other—too speculative to print. It was emphasized, however, that if an alcohol shortage did (does) exist, it was (is) only a temporary embarrassment since US capacity is sufficient.

Price Trends

Advanced
None

Reduced
None

Comparative Price Indexes
(100=1949 average)

Last week	Prev. week	Last month	April 24, 1959
132.19	132.19	132.34	130.60

For Current Prices See Page 11

Any story worth telling is worth the time for details, so here goes: Foreign alcohol began arriving here, for the first time in 22 months, in November, 1959. The quantity was relatively small —60,000 gallons valued at $13,200. All of this material came from Peru, as did the 480,000 gallons that arrived here in December. This shipment was valued at $105,600.

In January, imports soared. Totaling 1,977,826 gallons, material came from Cuba (1,673,826 gallons, valued at $405,126, for which the duty calculated by Customs was $125,536) and Peru (304,000 gallons, valued at $66,880, dutied at $22,798). The Cuban alcohol was delivered to Galveston, the Peruvian to Philadelphia.

In February, Cuba dropped out of the picture and Finland edged in. Shipping 1,223,234 gallons to Philadelphia, Peru recouped its position as the major if not sole supplier of alcohol to the US, while Finland, delivering to Galveston as Cuba did the month before, shipped 1,061,731 gallons. The Peruvian alcohol was valued at $281,101, dutied at $91,740; the Finnish at $257,916, dutied at $79,628.

Cuba's role as alcohol exporter is particularly interesting. First, because of the bearded isle's attitude toward the US; and, secondly, because last summer when Cuba announced that it was earmarking a considerable quantity of molasses for alcohol production, trade people generally greeted the report with a shrug. No fear that Castro will start dumping alcohol on these shores with the duty as it is, people said at the time. And they may have been right then but, lo, times change.

The tariff wall is, to be sure, quite high for ethyl alcohol. On material shipped from outside the iron curtain it's 7½ cents a gallon, and double this figure from the iron-bound. This more than anything else, it seems safe to say, is why imports have gone lower each year, and why significance may be attached to the recent influx of foreign alcohol.

Acrylonitrile—Trend toward greater use of acrylic fibers in a greater variety of textile products in the US is apparently to have its parallel in Japan. Several textile producers there reportedly have asked government permission to negotiate technical licensing agreements with foreign firms for production of acrylonitrile yarn. This latest move is thought to be part of a current Japanese drive to move up to modern synthetic fibers which obviously will be needed if Japan is to maintain its position in overseas textile and garment markets.

Also to boost requirements for acrylonitrile in Japan is a new process, using acrylo as raw material, for making monosodium glutamate. This is a food flavor enhancing agent that is coming into wide use in the US. Retailed by one chemical firm here under the trade name "Accent," MSG is also sold in bulk to large institutions and food packagers. You'll see the name of the chemical on some frozen foods, for example.

The new Japanese process for making MSG was found successful in pilot plant tests and by 1962 the firm expects to start production at 300 tons per month via the acrylo route. It figures that the switch to synthesis will allow greater production at less cost.

Glycerine—Entering March, glycerine producers held stocks amounting to 57,100,000 pounds. Less than a seventy-five day supply, this was 1 million pounds higher than inventories held at the beginning of the month but 4 million pounds less than those held the end of February, 1959.

Compared with January, February production, imports, and disappearance declined. Production was 25,000,000 pounds versus 25,600,000 the previous month—an insignificant drop; imports were 300,000 pounds versus 1,000,000; and disappearance was 23,000,000 pounds versus 27,300,000.

But as these statistics from the Association of American Soap and Glycerine Producers show, disappearance in February exceeded production by 2,000,000 pounds.

Cumulative totals for the first two months of '60, however, show that production and disappearance were appreciably higher than in the corresponding period of '59. Production was up just under 10 million pounds and disappearance was up 11.1 million pounds.

The decline in glycerine disappearance in February was due, perhaps, to the shorter month, the intervening holidays, and the heavy buying a month earlier.

Imports of crude glycerine in February totaled 316,436 pounds. Value of the entire quantity was $53,741, on which the duty was $1,264. Shipping here: Cuba 188,117 pounds and Thailand 128,321 pounds.

Molasses—Markets for feeding cane molasses were weak over most of the nation during the week ending April 19. Improving spring pastures were cited. Price at New Orleans was 8c. to 8¾c. a gallon.

Hawaiian cane blackstrap production in March was 4,648,122 gallons, bringing the cumulative total for the first quarter of 1960 to 7,329,231. March, 1959, output

Aliphatics Foreign Trade: February

Imports of selected industrial aliphatic organics for the months of January and February, 1960, as reported by the Bureau of Census, were as follows:

		February	January
Acetic acid (over 65 percent)	lbs.	448,660	1,155,470
Acetic anhydride	lbs.	79,450	78,710
Amyl alcohol and fusel oil	lbs.	0	0
Chloroacetic acid (mono and tri)	lbs.	628,994	946,491
Formic acid	lbs.	307,192	102,697
Glycerine, crude	lbs.	316,438	1,239,872
Carbon tetrachloride	lbs.	384,992	248,464
Lactic acid (55 percent or more by weight)	lbs.	23,792	20,615
Perchloroethylene	lbs.	1,331,668	2,502,828
Trichloroethylene	lbs.	1,926,245	5,177,695
Vinyl acetate, unpolymerized	lbs.	3,937,580	3,857,360
Vinyl alcohol, including derivatives	lbs.	0	225,154

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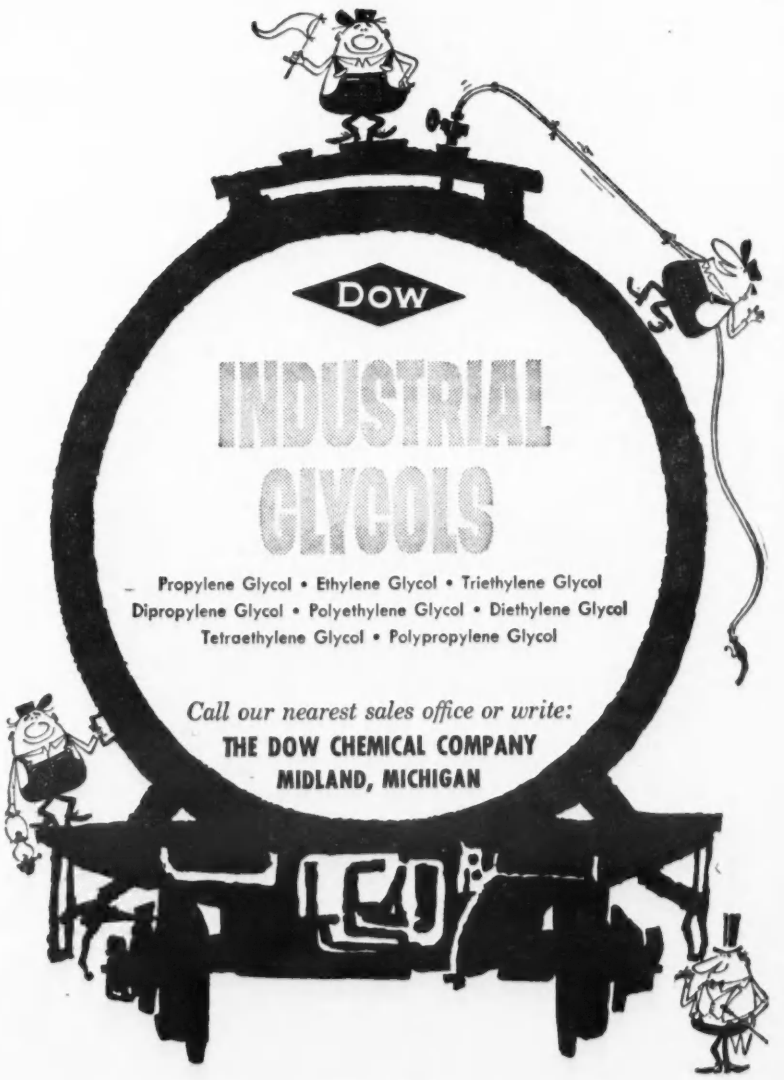
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Aliphatic Organics

was 4,235,841 gallons with the first quarter total 8,761,698.

Shipments of Hawaiian blackstrap to the US mainland were 2,407,167 gallons in March and 9,043,681 gallons for the first quarter. The March, 1959, figure was 2,499,894 and the total for the first quarter 12,157,119.

Puerto Rican sugar cane processing mills have contracted to sell about 800,000 gallons of 1960-crop blackstrap molasses. Price was 7c. per gallon, f.o.b. Puerto Rican ports, basis 52 percent total sugars and at least 46 degrees Brix for April delivery. This price, Agricultural Marketing Service advises, is subject to readjustment based on final average price of Cuban molasses but in no event lower than 7c.

Cuban exports of 1959-crop blackstrap, January through February 15, amounted to 17.1 million gallons, according to the Cuban Sugar Stabilization Institute. Cuban exports of 1960-crop blackstrap during the same period amounted to 1.1 million gallons.

Perchloroethylene — February imports of perchloroethylene, according to statistics available from the Commerce department, were 1,331,868 pounds, valued at $117,814. Calculated duty was $7,061. Shipping here: France 770,168 pounds; Canada 561,700 pounds.

In January, perchlor imports totaled 2,502,828 pounds, valued at $195,094. Calculated duty: $11,699. Shipping here were Belgium 1,726,898 pounds; France 566,470; Canada 111,460; Japan 98,000.

Despite the million pound decline in imports in February, it is likely that the ratio of imports to US production will be about the same as in preceding months. (In January, for example, imports were equal to more than 10 percent of domestic output of 20.7 million pounds.) This reasoning follows from the fact that February production is usually lower than January's because the month is shorter and because buyers tend to buy heavy at the beginning of the year to build up depleted inventories and then hold down purchases until late in the quarter.

Perchlor continues to gain as the solvent of choice in dry cleaning. Currently, it's said, about as much perchlor as Stoddard Solvent, the traditional agent, is used, but this 50-50 ratio will probably tip in favor of perchlor before too long.

At present, the large chain outlets still use Stoddard Solvent a spokesman for the National Institute of Dry Cleaning says, adding that no new Stoddard installations are being built except to replace old units. For several years, the smaller volume outlets, newer in the business, have favored perchlor and as these firms expand and their numbers grow larger, perchlor usage will climb proportionately.

Perchlor is said to account for about 40 percent of total dry cleaning volume of $2 billion a year.

Sodium Lauryl Sulfate—Food & Drug Administration has approved the use of sodium lauryl sulfate as a food additive in egg white products provided it meets the following specifications: (1) It is a mixture of sodium alkyl sulfates consisting chiefly of sodium lauryl sulfate. (2) It has a minimum content of 90 percent sodium alkyl sulfates. (3) It is used or intended for use in or with egg whites whereby the additive does not exceed the following limits: egg white solids, 1,000 parts per million; frozen egg whites, 125 parts per million; liquid egg whites, 125 parts per million.

Trimethylene Glycol—A producer has announced new prices for available grades of trimethylene glycol (1,3-propylene glycol). Revised listings, representing reductions, are: technical grade 95c. per pound in ton lots; 99 percent pure grade $1.75 per pound for a similar quantity.

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Drug Industry Able to Paint Its Own Picture

—Continued from page 5

record to show that the Food & Drug Administration's troubles with the industry are centered largely on only a very small percentage of the industry's total production. Companies that spend large sums on quality and control safeguards are seldom involved in FDA legal actions, he stated.

He told the committee that over the past six years there have only been four to ten actions per year involving any manufacturer who is a member of the PMA. On the other hand, there were anywhere from 139 to 203 actions a year taken against non-PMA members.

(PMA members account for about 95 percent of the drug industry production of the country.)

Dr. Smith testified that it is impossible to show that the drug industry is monopolistic or highly concentrated, for all the evidence is to the contrary. There are about 1,300 manufacturers of ethical drugs, he said, and the total has been growing. No one of these companies does as much as 10 percent of the total business.

He said that a committee charge introduced early in the hearings on "concentration of production, 1958" was "grossly misleading." A careful look at the chart, he added, will show that only twenty-seven of the fifty-one products listed are manufactured in bulk solely by single developers. It is no surprise that a particular medication within a broad category of drugs is manufactured in bulk only by the company that patented it, Dr. Smith said.

"Dr. Blair's chart would have you believe that three companies control the market for the corticosteroid hormone, prednisolone," Dr. Smith declared. "Actually the standard references used by physicians and druggists show that this market is shared, not by three manufacturers, but by forty-three.

"And prenisolone is but one of seven corticosteroids on the committee chart which are competing with one another. These charts and statistics prove beyond any doubt that the drug industry is one that has long embraced the concept of 'total competition.'"

Boggs Changes Okayed

—Continued from page 5

to American concerns which would expand their investments abroad so as to improve the economy of the nation and relieve the US of some of the financial burden involved in the Mutural Securities Program.

The bill was watered down considerably before it got out of the ways and means committee so that it applied only to overseas subsidiaries incorporated as foreign business corporations, which would be given the privilege of deferring US taxes on their earnings until the profits were brought to this country.

Even this grew unsatisfactory to a large group of liberals and conservatives in the house, and the Boggs bill, when called up a month ago, was saved from defeat only by action of the leadership temporarily withdrawing it from consideration. The changes now proposed by the committee, will be offered when consideration of the legislation is resumed on the house floor.

Pesticides Are All Ready

—Continued from page 5

and possibly close to the 1956 record of 569,927,000 pounds.

Benzene hexachloride and copper sulfate production were both lower than for many years, but production of DDT was higher in 1959 than ever before.

Dr. Shepard estimated DDT production at 156,738,000 pounds compared with 145,328,000 in 1958. BHC totaled 25,733,000 pounds against 30,797,000 pounds and copper sulfate, 80,584,000 pounds against 97,192,000 pounds.

Total carryover from the 1959 season by primary manufacturers and formulators of pesticides was at about the same level as on September 30, 1958.

Quinine Disposal

—Continued from page 3

ICA would have the authority under the law to accept the material for distribution abroad.

Furthermore, some foreign government would first have to make a request for the material before ICA could get into the picture.

It is estimated that domestic requirements for quinine total only about 750,000 ounces a year. Thus, if any use is to be made of the quinine, it will of necessity be by a foreign firm.

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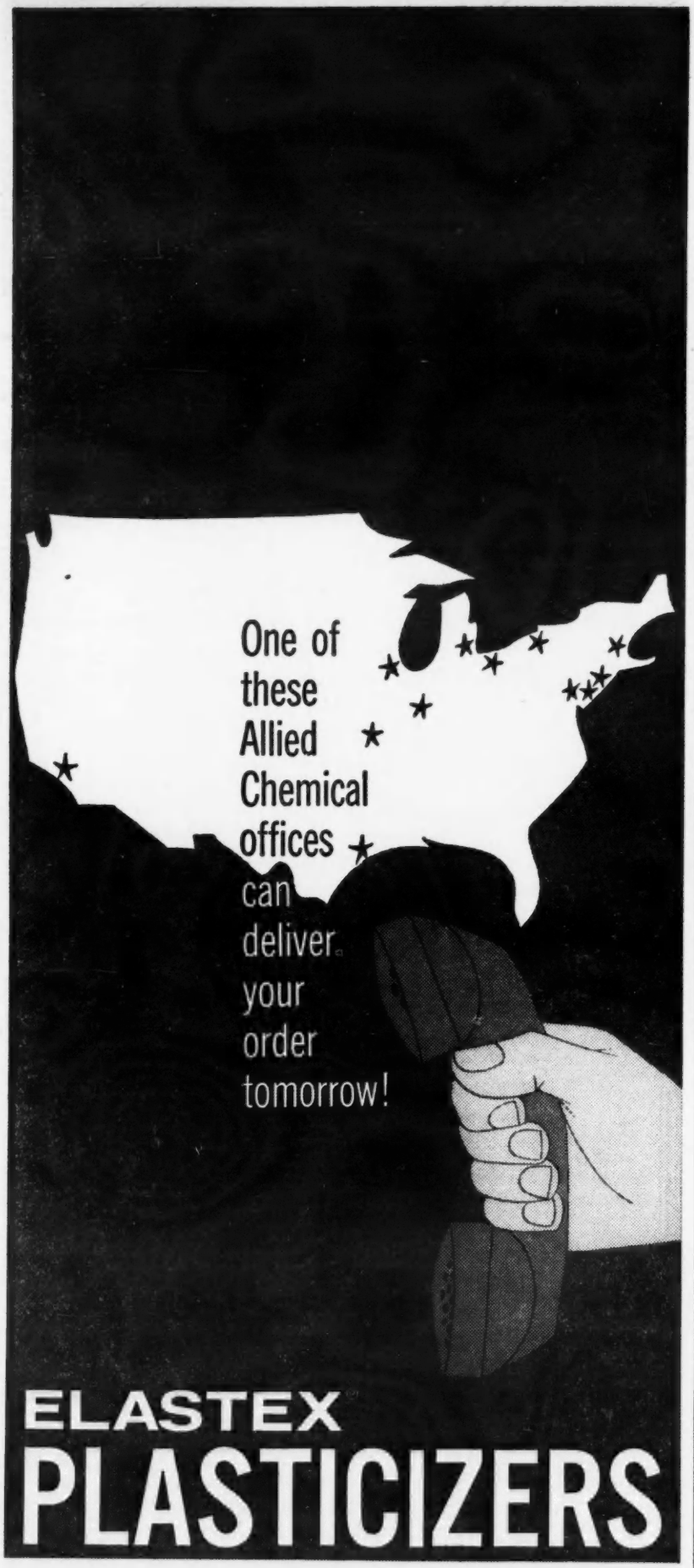

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Coal Chemicals

Looking back on the first quarter, coal chemicals trade sources find that although sales volume did not attain "boom" proportions, business in general was pretty good. Reports of the past month have uncovered some of the buoyant optimism that was widespread in the trade at the beginning of the year. However, the consensus is that second quarter sales will run slightly above the first quarter and that the summer "doldrums" will come in right on schedule about mid-July. For the year as a whole there was never much doubt but what the year was "in the bag." It seems the only question is what size the bag will be.

A petrochemical producer announced that a 120 million pound unit for the production of o-xylene would be built at Lake Charles, La. The announcement follows others, made earlier in the year by two petroleum sources that they would each add 70 million pounds of o-xylene capacity.

The American Iron and Steel Institute estimated that steel production in the week ended April 24 would amount to 80.9 percent of theoretical capacity equivalent to 2,305,000 net tons of steel. Output in the week previous was 2,225,000 tons, 2,597,000 tons in the comparable week one month ago and 2,646,000 net tons in the corresponding week one year ago.

Price Trends

Advanced
None

Reduced
None

Comparative Price Indexes
(100—1949 average)

Last week	Prev. week	Last month	April 24, 1959
118.40	118.40	118.40	118.57

For Current Prices See Page 11

Basic Products

Benzene—The problem of building and maintaining adequate inventories will continue to be of paramount importance in the second quarter, sources say. Petroleum operators have been running full and cokeovens have held to a steady production pace, although steel operating rate has dropped. Steel sources point out that steel capacity has grown so rapidly in recent years that an 80 percent operating rate is considered very good business.

Imports of benzene in February came from France and Russia. Material from France, in at Galveston, amounted to 1,125,883 gallons valued at $270,055. Russian imports, at Mobile and Galveston amounted to 3,600,174 and 746,543 gallons with values of $828,040 and $171,705 respectively. Total benzene imports for the month were 5,472,600 gallons valued at $1,269,800.

Naphthalene—Reports from trade observers indicate no changes in the general market picture.

The answer to the continued tight supply of import naphthalene, reliable trade sources say, is the fact that some European consumers have paid $260-$325 per metric ton, f.o.b. port.

Some domestic producers posted eral market picture. Supply is tight, but a 1c. per pound advance in crude naphthalene on April 1. Price range on crude 78 degree material in tankcar quantity is 5c.-6c. per pound as to producer.

Naphthalene imports during the month of February were as follows, according to report of the Census Bureau:

Country	Tonnage (lbs.)	Value
Canada	482,650	$28,523
United Kingdom	1,621,252	86,098
Netherlands	664,998	58,011
Belgium	792,443	87,524
France	87,523	8,655
W. Germany	217,810	27,178
Poland	440,920	39,179
Total	4,307,596	$335,168

Phenol — Formaldehyde-phenol resins are moving in good volume and thus form a hard core of active demand in the phenol market. Producers have reported sluggish demand for natural phenols, but noted signs of an upturn at the close of March.

A domestic producer recently outlined plans for construction of a phenol plant in Argentina. The company will join forces with an Argentine chemical producer to erect a phenol plant with capacity to produce 25 metric tons of phenol per day. The venture is contingent on additional financing for the Argetine firm from the Export-Import Bank.

A basic producer of phenolic resins is offering a new novalac resin for hot-processed sand coating. Superior hot strength, the company says, allows faster cures and freedom from shell warping or cracking.

Plywood bonding applications continue to take a good portion of phenolic resin output. The advance of mechanization in the plywood industry has kept phenolic resin producers busy turning out improved resin formulations to meet stepped up production schedules of plywood makers. As a consequence of the increased amounts of phenol moving to this industry in the northwest, expansions and new construction efforts in the phenol market have been centered in this area in order to place the chemical producer closer to the eventual consumer.

Toluene—Market remains adequately supplied overall. A spring upturn in paint sales has made for a seasonal improvement in the market. Census Bureau reported exports of toluene in February amounting to 27.4 million pounds.

Xylene—A petrochemical producer reported that a 120 million pound plant for production of o-xylene will be constructed at Lake Charles, La. Output of the plant has been contracted for by another petrochemical firm, currently building an o-xylene plant of its own at Big Springs, Tex. The Big Springs producer will market the new unit's o-xylene through a New York export firm.

Current domestic capacity for o-xylene is estimated at about 70 million pounds and 30 million of this is used for captive production of phthalic anhydride by a petrochemical producer. Including expansions announced since the first of the year, capacity would be swelled to about 340 million pounds.

o-Xylene may be recovered by a straight distillation process, which is the most likely, or by a more costly isomerization process. Since the export market is the big outlet for o-xylene and contracts are reported to have been made for about 5½c. per pound, observers feel the o-xylene will be recovered by simple distillation.

o-Xylene is present in the stream at about 20 percent concentration and a simple distillation would recover about 18 percent, it is said. On this basis, produc-

Aromatics Foreign Trade: February

Following statistics are compiled from Census bureau reports. Units used by the bureau are retained in all cases. Attention is called to the fact that exports of toluene are reported in pounds.

	February 1960	February 1959	First two Months 1960	First Two Months 1959
EXPORTS				
Benzene ....gals.	1,350,994	298,377	2,761,814	2,448,608
Coaltar, crude and refined....gals.	31,561	18,688	60,717	48,837
Creosote or dead oil....gals.	1,370	0	1,590	34,304
Cresols and cresylic acids....lbs.	898,417	879,835	1,858,410	1,646,512
Phenol ....lbs.	3,146,738	2,300,095	4,930,963	9,692,290
Phthalic anhydride....lbs.	721,984	156,000	1,191,483	1,937,480
Pitch ....short tons	2,991	3,829	5,113	7,175
Toluene ....lbs.	27,458,572	8,708,121	72,686,449	45,125,182
IMPORTS				
Benzene ....gals.	5,472,600	9,240,432	5,472,600	13,022,190
Creosote and dead oil....gals.	800,000	2,450,000	6,798,944	9,366,424
Cresols and cresylic acid, ADF....gals.	255,581	123,759	397,285	268,736
Naphthalene, melting point less than 79° C..lbs.	4,307,596	3,612,750	8,810,964	14,068,455

Coal Chemicals

tion of 340 million pounds of o-xylene would mean use of 1.7 billion pounds or about 270 million gallons of xylene. Total production of xylene last year amounted to 244 million gallons.

Dyes

Dyes—A major dye producer announced addition of an improved olive green vat dye to the company's extensive list. The material is expected to be of particular interest due to its level dyeing properties for steam pad work. Good coverage and top fastness ratings make the dye a highly satisfactory shading color for olive greens and khakis, the company reports. Use of olive green tones in twills, poplins and cotton and rayon fabrics for slacks, suits shirts, work clothes and outdoor wear has shown a steady increase in recent seasons, it is reported.

Coal Chemicals

Estimated output of coal chemicals recovered from cokeoven operations during the week ended April 24, was as follows:

Ammonia liquor	lbs.	729.469
Ammonium sulfate	lbs.	30.678.234
Benzene	gals.	2.958.403
Coaltar	gals.	16.169.901
Crude chemical oil	gals.	472.804
Solvent naphtha	gals.	94.560
Toluene	gals.	661.925
Xylene	gals.	189.121

Intermediates

p-Dichlorobenzene — Withdrawals of liquid remain routine. Sales volume on crystals has improved seasonally with the approach of the spring moth proofing season.

2,6-Di-tert-butyl-p-cresol—Sources report a fair seasonal boost in sales volume on technical as well as food and feed grade material. A producer recently announced that antioxidant capacity (butylated hydroxytoluene and 2,6-di-tert-butyl p-cresol) would be expanded by 40 percent to a potential 6 million pounds per year at Fords, N.J. Currently, five producers of 2,6-di-tert-butyl-p-cresol turn out about 15 million pounds of technical and food and feed grade material per year.

Monochlorobenzene — Market is unchanged. Sales volume of chlorinated benzenes has been fairly well sustained. Tariff Commission reported production last year totaled nearly 550 million pounds.

b-Naphthol—Price was advanced 1c. per pound across the board, effective April 1. Buying has slowed somewhat as consumers are reported living off inventories accumulated in antipication of the price increase.

Phthalic Anhydride—No change is forecast in the phthalic anhydride supply picture during the balance of this month and next. Consumers have not been hurting on phthalic, but the tight supply situation has been extended because of the severe naphthalene shortage. As a result of the shortage, PA producers have been unable to operate at peak efficiency levels. Operating rates have been curtailed, yields, at times, have been lower through use of raw material other than naphthalene, and suppliers have had to ship material from points where it is uneconomical to do so due to pressing demand.

Rubber Accelerators—Although new auto sales have improved somewhat, inventories of new cars and tires have been gaining. Chemical trade sources point out that this could make for a slower April-May period than had been expected. Projections for April have uncovered nothing exceptional in distribution and consumption patterns. Prices on accelerators held steady and unchanged.

Styrene Monomer—Producers continued to report optimistically about another record year in this market as demand from rubber and plastics industries have been well sustained.

Output last year set a new record and observers were hopeful that acceptance of new compact cars would provide the impetus for a further increase. At the same time, however, it was noted that the smaller cars not only consume less steel, but less of other components such as plastics and synthetic rubber. This would be reflected in the styrene monomer market. As in the past, sales of replacement tires have helped to bolster the synthetic rubber outlet for monomer producers.

Last price change in this market was the 5/100c. per pound across the board advance in the price of technical grade monomer which was put into effect by major producers on April 1.

Rohm & Haas Weighs

—*Continued from page 3*

acre site along the Ohio River. What attracted the Philadelphia company to the butadiene installation were its favorable location and its excellent basic facilities for general chemical manufacturing operations.

At no time did Rohm & Haas consider getting into the butadiene business, nor does it now. What it sees in the new plant is increased capacity for products in which it is well established and a long-sought bridgehead to the midwestern market.

The Louisville unit will be the fifth of the company's domestic plants. Others are located at Philadelphia and Bristol, Pa; Knoxville, Tenn., and Deer Park (near Houston), Tex.

Freeport, Cuba

—*Continued from page 3*

ficials have shown some willingness to reach an accord during these talks. They have made several suggestions, he said, "which could conceivably lead to a solution. But nothing conclusive has been decided. "It is impossible to say whether we will reach a solution and resume operations."

The company's decision to halt operations came when Cuba's revolutionary government announced the imposition of harsh new taxes on mining which immediately frightened away needed financing for the venture.

Fair Trade Legislation

—*Continued from page 5*

house rules committee by attaching the fair trades bill as a rider to some piece of legislation reaching the senate from the house, this is considered remote and there has been no decision made whether to attempt it this year.

The senate interstate commerce committee last year agreed not to consider fair trade legislation until after the house had disposed of it.

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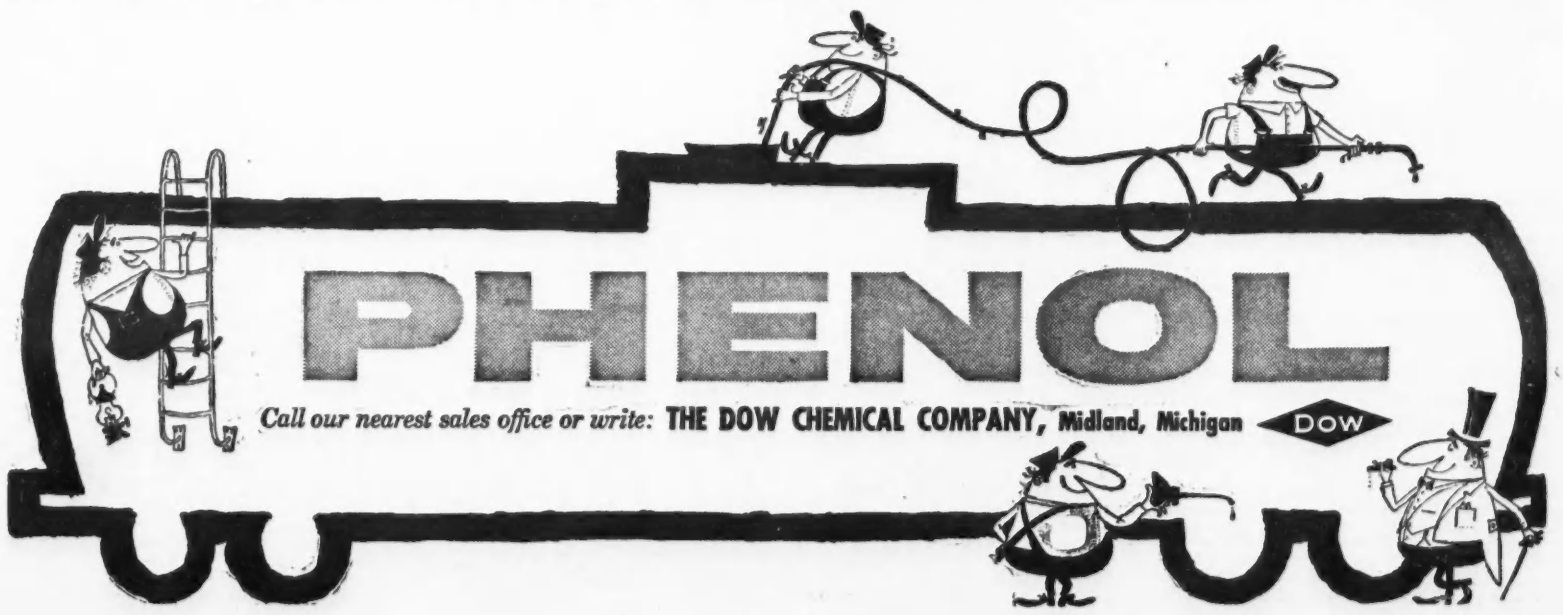

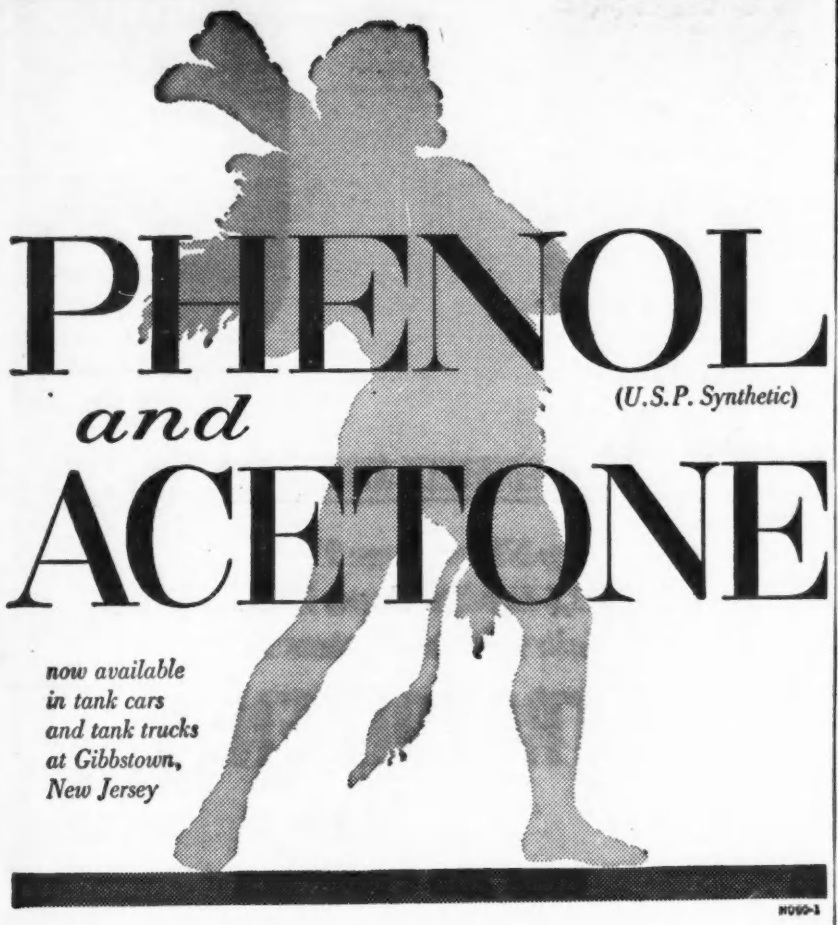

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Proprietary Group Books Larrick and Nolen Talks

The Proprietary Association has booked George P. Larrick, Commissioner of the Food & Drug Administration, as one of the principal speakers at its annual meeting slated for May 15-18 at the Greenbrier hotel, White Sulphur Springs, W. Va.

Sharing top billing with Mr. Larrick will be Dr. Norman Vincent Peale, nationally known minister and author; Herman C. Nolen, president of McKesson & Robbins, Inc., and James F. Hoge, the association's general counsel.

Farm Chemicals Relieved

—Continued from page 7

ments of the law last March 6 when the food additives law became effective, but, to give the Food & Drug Administration time to process petitions, a postponement of the effective date was considered advisable.

Stating the available scientific data indicates that no undue risk to the public health is involved, FDA extended the effective date of the law to the following chemicals for specific uses:

p-Chlorophenoxy acetic acid or its diethanolamine salt, on tomato blossoms to increase fruit set.
p-Chlorophenoxy acetic acid or its diethanolamine salt, on cane berries and grapes to produce larger fruit.
p-Chlorophenoxy acetic acid or its diethanolamine salt, on figs to produce large seedless fruit.
1,2-Dibromo-3-chloropropane, soil fumigant for nematodes.
1,2-Dichloropropane, soil fumigant for nematodes.
1,3-Dichloropropene, soil fumigant for nematodes.
Gibberellic acid, on grapes to increase fruit size.
Magnesium chlorate, on cotton as defoliant.
a-Naphthalene acetic acid or its ammonium salt, on olives to reduce fruit set.
b-Naphthoxyacetic acid, blossom spray to increase set of fruits and vegetables.
Pentachlorophenol, on cotton, potato vines, sugar beet tops, and soybeans as defoliant.
Sodium metaborate, on cotton as defoliant.
Sodium chlorate, on cotton as defoliant.
2,4,5,-Trichlorophenoxy acetic acid or its butyl ester, on grapefruit to increase size and control fruit drop.
2,4,5-Trichlorophenoxy acetic acid or its triethylamine salt, on apricots to improve color and to control fruit drop.
a-2,4,5-Trichlorophenoxy propionic acid or its diethylamine salt, on apples to improve color and control fruit drop.

Orthoxylene Finds Producer

—Continued from page 5

but Delhi-Taylor popped up in Corpus Christi, Tex., with the announcement that it would have its capacity all set to run by June.

Other makers are holding to prominent places in the parade, too:

- Suntide Refining Company has a 30 million pounds merchant potential annually at Corpus Christi.
- Humble Oil & Refining Company can produce 6 to 8 million pounds a year at Baytown, Tex.
- Oronite Chemical Company is making 30 million pounds yearly at Richmond, Calif.

The producers all have their eyes on the overseas market, which will probably absorb some 650 million pounds by the end of this year.

MATTIELLO LECTURER: Henry F. Payne, professor in charge of organic coating research and technology at the University of Florida, named to present the Joseph J. Mattiello Memorial Lecture at the annual meeting of the Federation of Societies for Paint Technology in Chicago next fall.

HEW's Additives List Adopted by New York State

A safe list of food additives corresponding to the list adopted by the Department of Health, Education & Welfare has been established for the State of New York. This list replaces a preliminary one promulgated by the state in February 1959.

As other additives to commercial foods and food products are approved by the federal government, the state plans to follow through with additional safe lists.

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Agricultural Chemicals

Following a competitor's announcement the week before, a second major producer last week announced its 1960-61 price schedule for potash muriate. Both schedules are similar, providing for increases of 3 to 3½ cents per unit K_2O. This in effect, returns the listings to the approximate 1956-57 level. In the schedule just issued, prices for sulfate of potash also are set for the new fertilizer season (see below for details). Contacted by OPD, other producers said they were confident the market could sustain the higher muriate prices. They were reluctant, however, to commit themselves to a schedule at this time. One spokesman maintained that the domestic market was presently still too unsettled to advance his schedule. He said he would prefer to watch market developments before making any commitments.

Price Trends

Advanced
None

Reduced
None

Comparative Price Indexes
(100—1949 average)

Last week	Prev. week	Last month	April 24, 1959
109.97	109.97	110.72	112.61

For Current Prices See Page 11

As reported by the US Fish and Wildlife Service, fishmeal production during January dropped about 21 percent from that reported for the same month in 1959. Total 1959 production of fishmeal amounted to 275,396 tons. The Service also noted that in 1959, the catch of fish for the manufacture of industrial products and animal food exceeded, for the first time, the quantity taken for human consumption.

Imports of fishmeal during 1959 were 32 percent greater than those in 1958, and the highest annual amount received in the United States since 1954. The principal suppliers were Peru, Canada and Angola. In January, 1960, however, imports of meal were down 56 percent from those in January, 1959. Imports in 1959 totaled 132,955 tons as compared to 100,352 tons in 1958.

USDA reports that the number of cattle on feed increased 8 percent in 21 major feeding states, when compared to data for 1959. The number of cattle on feed in the north central states was up 6 percent while in the western states the number is reported to have increased 17 percent. Feeders in the 26 states report marketing intentions of 3,532,000 head during the April-June period, or 53 percent of the April 1 reported inventory.

Animal and Plant Foods

Ammonium Sulfate—Supplies are reported to exceed demand by an appreciable margin. Late planting in many sections of the country has worsened an already top-heavy supply picture. Trade sources contend that the surplus of material should preclude any possibility of a price increase at this time.

Animal Proteins—Quotations for fishmeal dropped $5 per ton, bagged, on both Atlantic and Gulf coasts. At $100 per ton last week, fishmeal quotations broke the one hundred dollar mark at the end of March when the price was $105 per ton.

Fishscrap is at $97 per ton, same basis, also down from a previous high of $101.

Sources report that the market is firm at the lower prices and market conditions should improve at the lower quotations. Buyer's interest is felt to be sustained as more buyers enter the market attracted by the lower prices.

Prices for dried blood and tankage continue at established listings with very little buying interest apparent. Activity in the East is said to be quiet, while business in the Midwest is reported to be off, particularly in Chicago.

Imports of fishmeal and scrap totaled 1,404 short tons in February. Peru supplied the greater amount with 1,153 short tons and Chile the remainder. Last month imports were 1,166 short tons with Peru again supplying the greater amount with 660 tons.

Potash—A second producer of potash muriate has announced a price schedule for the 1960-61 fertilizer season. This firm's listings conform with those announced in the last issue of OPD. In both cases the schedule for standard grade potash muriate, f.o.b. cars, Carlsbad, New Mexico, in minimum carloads of 40 tons, is:

Contracts made before July 1, 1960 for shipment during the following months: July-August 33c. per unit K_2O; September-October 34c. per unit; November-December 35c., per unit and January-June, 1961, 37½c. per unit.

Bulk prices for coarse or granular muriate during the same periods as specified above are uniformly 1c. per unit K_2O higher. On contracts made after June 30, 1960, 2c. per unit on bulk shipments and $1.20 per ton on bagged shipments of all grades.

Included in this announcement is a new listing for sulfate of potash. The new schedule for the season July 1, 1960 through June 30, 1961, on the same basis as muriate of potash, is: for July-September, 1960 62.5c. per unit; October-December, 1960 67.5c. per unit; January-June, 1961 70.5c. per unit. Material in bulk shipments, a minimum of 50 percent K_2O.

Other producers contacted last week were not ready to make known their price schedules at that time. Some are awaiting further indications that the proposed schedules will stick before making any commitments. However, most trade sources are confident that the higher listings will hold and that other producers will fall in line with announcements of similar schedules in the future.

Lime—Lime sold and used in February increased over the previous month's output according to reports by producers to the Bureau of Mines. Overall consumption of lime in February was 981,898 short tons. Total amount of lime sold and used during the two month period, January-February of this year was 1,955,557 short tons. For the same period in 1959 the total was 1,416,076 short tons.

For February, consumption of lime for agricultural uses was 7,659 short tons. While this shows an increase from January's total of 6,368 short tons, it is significantly lower when compared to the 10,472 short tons reported for February, 1959.

Farm Chemicals Imports: February

Following are data compiled by the Census bureau indicating volume of imports of agricultural chemicals for January and February, 1960. Figures for ammonium phosphates and fishmeal and scrap account only for that material intended for use as fertilizer. All figures are in short tons.

	February	January
Ammonium nitrate (over 32 percent N)	16,834	9,848
Ammonium nitrate mixtures (32 percent N or less)	11,571	545
Ammonium phosphate	10,266	8,299
Ammonium sulfate	25,377	13,868
Calcium cyanamide	4,136	2,444
Castor bean pomace	1,102	1,547
Dried blood	739	320
Fishmeal and scrap	1,404	1,166
Guano	15	41
Nitrogen Solutions	2,269	1,402
Peatmoss (fert. grade)	24,845	9,111
Phosphate rock	8,807	7,694
Potassium chloride, crude	65,634	14,964
Potassium nitrate, crude	35	46
Potassium sulfate, crude	6,756	4,774
Sodium nitrate, crude and refined	17,622	25,609
Urea	10,566	5,602

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CHEMICAL FORECAST 1964

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Benzene • Toluene

NITROGENATES
Urea • Ammonia

POLYMER CHEMICALS
Vinyl Resins • Polyethylene Resins • Styrene-Butadiene Synthetic Rubber

THE ALCOHOLS
Ethyl Alcohol • Methanol

ETHYLENE CHEMICALS
Ethylene Oxide • Ethylene Glycol • Diethylene Glycol

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Enzyme Use Seen Spurred by Drugs, Stockfeeds, Foods to $60 Million in 1965

OPD Special Report on Industrial Enzymes

—*Continued from page 3*

Health, Education & Welfare ruled that enzymes derived from bacillus subtilis, aspergillus flavus oryzae and aspergillus niger organisms are safe in foods, and can be added to untreated stockfeeds.

But there are a lot of contingencies in the stockfeed treatment picture. For one thing, while the government has ruled on the safety of enzyme addition, nobody has said anything about efficacy.

This means it's up to enzyme producers to convince feed mixers and stock raisers that addition of enzymes will increase the value of the stock several times the increased cost of addition to feeds.

Then, too, the government has not ruled that enzymes can be added to chemically-treated feeds. For instance, enzymes cannot legally be added to feeds containing stilbestrol—and 80 percent of the cattle fattened in feedlots for market are fed stilbestrol-containing feeds.

Enzymes for Feeds: $5 Million Market

But it's believed by the industry that once the cattle feed picture is clarified, addition of enzymes for stockfeeds in this area alone could amount to a $5-million-a-year market.

Some of the most publicized work on enzyme addition to feeds has been in the poultry field. Reports are that in the northwest, barley at $45 per ton plus the proper amount of enzymes added equated the nutritional value of corn at $60 a ton.

But there are several factors which question the validity of the results obtained. First, northwestern barley needs enzymes to upgrade it, whereas barley grown in other parts of the country has a nutritional value comparable to other grains.

Second, when the experiment was tried in the northwest, barley was depressed in price. Then barley prices rose as a result of higher export demand, immediately making it questionable as to whether to use corn without extra enzymes or barley with them.

Where such events happen to markets for various meals and grains, efficacy is of little importance to growers when better meals can be substituted.

But producers of enzymes are convinced that, once the Food & Drug Administration's doors are battered down on technicalities, once the growers and feed mixers realize that for a onefold increase in cost, stock benefits will be increased four-or-fivefold, demand will boom.

Right now, a $5 million enzyme market for cattle feed is envisioned in 1965, along with a $2 to $3 million demand for swine, and a $500,000 consumption for poultry use.

Hogs are fed pepsin to aid their digestion now. A key advantage in using enzymes in hog raising is the quicker weaning of shoats. Stock raisers point out that the most expensive food source for baby swine is the sow's milk. Nursing time can be dramatically reduced if the shoats are supplied enzymes to help them digest feeds.

If animal nutrition is expected to grow rapidly within the next few years as a consumer of industrial enzymes, human nutrition won't be very far behind.

The Future of Glucose Oxidase

Use of industrial enzymes in preparation of various foodstuffs has been common for years. While satisfactory growth is predicted in the food field in general, one segment—glucose oxidase—looks most promising.

Current biggest use of glucose oxidase is the stabilization of egg solids, particularly whole eggs. But FDA sanction for use in foods where standards of identity have not been established has opened new vistas.

Fermco Laboratories, Inc., Chicago, has a glucose oxidase oxygen scavenging packet, currently being used by the Quartermaster Corps of the Army.

The Quartermaster Food & Container Institute has tested the pack in whole milk solids and dry ice cream mix and finds it in many ways superior to gas packing even when double nitrogen flushing is used, according to Fermco.

Other applications looming large: A can company says the enzymes could replace vacuum closing equipment; juice-based soft drinks can be stabilized against sunstruck flavor; the enzymes can be used in the co-stabilization of ascorbic acid and cyanocobalamin.

Market potential for glucose oxidase lies with its ability to scavenge oxygen—and what food doesn't have an oxygen problem in storage periods?

It is also hoped that catalase, successfully used in hydrogen peroxide sterilization of milk to remove the trace H_2O_2, will find larger markets in the future.

Catalase Sales Very Small

However, sales of catalase this year are reportedly very small in value or volume, and there has been vociferous resistance to use of H_2O_2 in cheese manufacture in Wisconsin.

With the market for glucose oxidase pegged at $550,000 now, one observer's guess is that demand will account for ten times this figure in five years. Other estimates are far less optimistic.

INDUSTRIAL ENZYME SALES PROFILE: 1960

Pharmaceutical Dollars Bolster a $26.5 Million Market

Consumer	Enzyme Type	Sales
Pharmaceuticals	Various	$12,000,000
Beer Chill-Proofing	Protease	$4,000,000
Textile Desizing	Amylase, Protease	$3,000,000
Cheese Production	Rennin	$3,000,000
Miscellaneous Food, Industrial	Various	$1,000,000
Leather Bating	Protease	$900,000
Meat Packing, Tenderizing	Protease	$750,000
Dairy, Other	Glucose Oxidase	$550,000
Syrup Conversion	Amylase	$400,000
Fruits, Juices, Wines	Pectinase	$350,000
Baking	Protease, Amylase	$200,000
Dry Cleaning	Protease, Amylase, Lipase	$200,000
Paper Industry	Amylase	$100,000
	Total	$26,450,000

While pharmaceutical, stockfeed and food uses discussed above look the most glamorous over the next several years, the old established applications are seen showing good growth as well, with few exceptions.

The paper industry consumes about $100,000 of enzymes for starch modification at present. This volume has been building gradually for some years at the expense of chemically modified starches.

While continued expansion of enzyme markets is forecast, based largely on increased paper requirements, producers of chemically-modified starches insist that enzyme encroachment has reached a plateau.

Enzyme producers disagree, feeling that the paper market can stand further penetration, and that higher-priced chemical starches are due for more losses. Nobody can foresee at present how the battle will end.

Textile desizing, in pound volume, may be the largest single consumer of enzymes. Amylase and protease types have long been used for conversion of starch to sugar and dextrins to completely remove it from cloth.

Textile Volume: $3 Million

Dollar volume of this end-use is estimated at around $3 million at present. There is some feeling that this figure is considerably beneath what the market was five years ago—around $5 million then.

One factor in the decline is said to be production of enzyme formulations of much greater potency; another, the rise of synthetic fibers; another, a couple of so-so years in the textile business.

This end-use has been pretty well exploited, observers say, and while growth in line with textile gains is anticipated, it's not likely that anything dramatic will happen to enzymes in this field.

Another long-established application for enzymes is in the leather industry. For centuries, leather was steeped in horrendous concoctions of fermenting fecal matter in order to strengthen it and give it a fine grain. The process, called bating, was risky and uncontrollable.

Around the turn of the century Dr. Otto Rohm combined appropriate enzymes with deliming salts to bate leather and, in 1907, Rohm & Haas Company was set up to supply the leather industry with the materials.

Leather since then has had its ups and downs. One influence has been the inroads of plastics on formerly hallowed precincts. Then, too, when times are prosperous, luxury sales of leather (women's all-leather coats, for instance, or the red leather interiors of convertibles) can boom demand.

It's difficult to peg the size of this market, chiefly because Rohm & Haas has the lion's share of it. But outsiders say it's worth as much as $900,000 a year.

Perhaps the second largest use for enzymes today is in the beer brewing industry, specifically for prevention of cloudiness in beer. When beer is chilled, unless a protein-digesting enzyme is added, a proteinaceous haze forms.

In order to eliminate this cloud, protease is added to beer to the tune of $4 million annually. Wallerstein Company, Staten Island, N. Y., a division of Baxter Laboratories, Inc., has most of this market.

Beer, like leather, reacts to the economic tenor of the times but in an inverse ratio. That is, when times are good—as they have been recently—people switch to more powerful stuff.

When a recession rolls around, the drinking retrenchers console themselves with the less expensive foaming brew and beer sales rise. Beer output—93.1 million barrels in the US in 1959—is slated to drop to 92.7 million in 1960, but could rise to 106 million in 1970, says the US Brewers Foundation.

Use in Beer Should Go Up

Hence, consumption of enzymes for chill-proofing beer should increase accordingly, depending on the economic vicissitudes and drinking habits of the next five years.

Rennin, another important enzyme in the food industry, is capable of coagulating 25,000 times its own weight of milk. This material is derived from calves' stomachs and is used in the cheese industry at the rate of more than $3 million annually.

Currently, there is a worldwide shortage of rennin, and prices have risen from $5 per gallon to more than $12. Because of the uncertainties of the market, there have been attempts to penetrate the cheese-making area in an experimenal way with microbiological-derived enzymes. Rennin is expected to hold its own in cheese production, however.

A rising demand for meat tenderizers has taken place during the last several years. Papain, a vegetable enzyme imported chiefly from Ceylon, has figured most prominently in this end of the market.

Meat is tenderized at the packers' both by solutions and powders. It can be tenderized by restaurants, institutions, and even by ultimate consumers with various commercial preparations available on the market.

Papain and Meat Tenderizer

More than $1 million of crude papain was imported in 1959. Producers estimate that $750,000 of finished product reached the market as meat tenderizer.

The meat packing industry promises to be one of the more promising fields for enzymes in the future. Experiments are being carried on at present in tenderizing carcasses right at the slaughterhouse.

These involve pumping the animal's vascular system full of enzyme solution right after it has been slaughtered and drained. Some difficulty has been encountered thus far in that the vascular system of a freshly-slaughtered animal tends to collapse.

However, it's expected that demand for protease enzymes for use at the packers' will grow substantially with the development of new technology.

The corn products industry has long been a marketer of corn syrups. The larger portion of corn syrup marketed now is acid-converted. But industrial enzymes of the amylase variety are widely used to convert starch into HDE (high dextrose equivalent) sweet glucose syrups.

These syrups are much sweeter to the taste than other corn syrups, and are widely used in candy manufacture and in other areas where sweetness akin to that of cane sugar is desired.

Demand for amylase enzymes for syrup conversion right now is estimated at $400,000. Inquiry is not expected to grow in a spectacular way, only in terms of growth of sweet syrup consumption.

Another facet of the food industry important to enzyme producers is fruit processing, which makes use of an estimated $350,000 of pectinase annually.

What Pectinase Does

This enzyme hydrolizes and solubilizes pectin, a high molecular weight colloidal material which forms viscous water solutions and acts as a protective colloid in suspending foreign insoluble material in fruit juices.

After action of the enzyme, insoluble particles settle readily, juice clears and problems of filtering are markedly reduced. Pectinase is also said to retain the delicate elements of taste and aroma.

Applications for pectinase include clarification of unfermented fruit juices, wines, vinegar, fruit extracts and concentrates—specifically in apple juice con-

—*Continued on page 54*

Trade Name Chemicals & Specialties

Air Reduction Chemical Company announced a revised price schedule for the company's line of **"Surfynol"** nonionic surfactants and defoamers. Principal change involves an advance in the price of **"Surfynol 102"** to $1.50 per pound in 140-lb. net fiber drum. The increase reflects a series of advances in raw material cost. The company also reports addition of **"Surfynol 104TBP"** to the product line. The new product contains 50 percent by weight of active di-tert-acetylenic glycol in tributyl phosphate. Reported applications are as a defoamer for aqueous systems, particularly color coatings in paper manufacture.

Makers of feed supplements are watching with interest the progress of Commercial Solvents Corporation's new zinc bacitracin product, **"Silotracin."** The product, marketed for the first time early this year, is aimed at preventing spoilage of silage and represents the first time an antibiotic used for human and animal health has also found use in the preservation of harvested forage crops.

The need for more selective methods of separation and recovery of metal concentrates has continued to keep chemical suppliers of ion exchange resins busy in their laboratories. Use of solvent extraction in this field had led to development of products such as General Mill's **"Alamine 336"** which, the company reports, is currently being used in a commercial process for the simultaneous extraction of uranium and vanadium from the same liquor.

WHAT'S REPORTED ON HERE

Though coverage in the Trade Name Chemicals & Specialties market report encompasses twenty classes of chemicals, only a few of them are mentioned in this issue. Here's the entire list:

Adhesives, antibacterials and fungicides, antifoaming agents, antioxidants, antistatic agents, blowing agents, catalysts and accelerators, chelating agents, chemically processed oils, emulsions and latexes, enzymes, fatty acid derivatives, feed supplements, filtering materials, ion exchange resins, surfactants, synthetic waxes, textile chemicals, thickening and suspending agents, and ultraviolet absorbers.

If you have suggestions for any additional materials that might be included in this section, write OIL, PAINT AND DRUG REPORTER'S Technical Editor, 30 Church street, New York 7.

Adhesives

Probably the largest single application of phenol-resin adhesives is in the plywood industry where these glues are used for exterior-type Douglas-fir and other softwood plywood. The plywood industry has become highly mechanized with large multiple-opening hot presses with automatic loading and unloading devices for high-speed production. In recent years there has been an increasing trend toward extending phenol-resin glue with cheaper materials such as residue from furfural manufacture and dry, soluble whole blood to produce lower cost glues for interior-type softwood plywood.

Phenol resins are usually produced by condensation of phenol with formaldehyde and are supplied as solutions, powders or impregnated paper films. They are normally cured at 275 degrees Fahrenheit or higher. Resins condensed from resorcinol and formaldehyde are about the same as phenol resins except that they can be cured at 70 degrees Fahrenheit and thus do not require hot-press equipment.

Koppers Company, Inc., markets **"Penacolite"** adhesives, a series of resorcinol-formaldehyde and resorcinol-phenol-formaldehyde resins developed to meet the need for an adhesive that would provide a bond as durable as heat-cured phenolics, but could be used in constructions where the application of high heat was not feasible. Koppers points out that although room temperature cure (70 degrees F.) is adequate for most soft woods for nearly all services, the most durable glueing is performed at temperatures between 110 degrees and 180 degrees F. The **"Penacolite"** adhesives are thermo-setting and the bonds they form are as strong as the woods they join over all conditions of temperature from minus 40 degrees Centigrade to temperatures that actually char wood, the company reports.

"Plyophen P-398" is a liquid, water soluble phenolic resin marketed by Reichhold Chemicals, Inc., and is designed to provide water-proof or water resistant adhesives for the bonding of hardwood or softwood veneers in hot press plywood production. Another Reichhold phenolic, **"Plyophen 2000-PGL,"** is a continuous dry film resin supported on a cellulosic carrier which has been developed to meet the need for a water-proof adhesive in film form. The material is available at the present time in 38-inch, 50-inch and 62-inch widths.

Feed Supplements

Scientific feeding of farm animals in this country has continued to be a virtual necessity as farmers have been forced to streamline their entire operation in order to keep pace with a growing population and a rising standard of living. As a result standards of farm achievement accepted a quarter of a century ago would not be tolerated today.

For example, poultry raisers of today may realize 35-40 pounds of meat per 100 pounds of feed as against 20 pounds for the same amount of feed thirty years ago. Part of the credit for this increase has to go to chemical suppliers of a wide variety of antibiotics, vitamins and minerals which are readily available in commercial quantities at attractive prices.

Among antibiotic growth stimulants, Commercial Solvents Corporation's **"Bacitherm-5"** has found widespread use in manufactured feeds for some time. However, the company came on the market early this year with a new product, **"Silotracin,"** which prevents spoilage of silage. The active ingredient in both of these products is zinc bacitracin. In marketing **"Silotracin,"** the company points out that this is the first time that an antibiotic used for human and animal health also has found application in the preservation of harvested forage crops.

"Silotracin" was developed at Commercial Solvents' research center in Terre Haute, Ind., and has undergone extensive field testing throughout the United States for the past three years. Addition of the material to the contents of farm silos in small quantities insures protection of silage by selectively discouraging bacteria which make poor quality silage and encouraging bacterial action which preserves silage nutritional value. When **"Silotracin"** feed is removed from the silo, no trace of the antibiotic remains. CMC spokesmen point out that estimates of ruined silage due to uninhibited bacterial action have been placed as high as 20 percent. The addition of 5 pounds of **"Silotracin"** per ton of silage would insure against heavy expenditures for winter feeding which the farmer must make if his silage is ruined, the company says. Effectiveness of **"Silotracin"** has been demonstrated with alfalfa, brome grass-alfalfa mixtures, Johnsongrass, clover, millet, oats and bermuda grass.

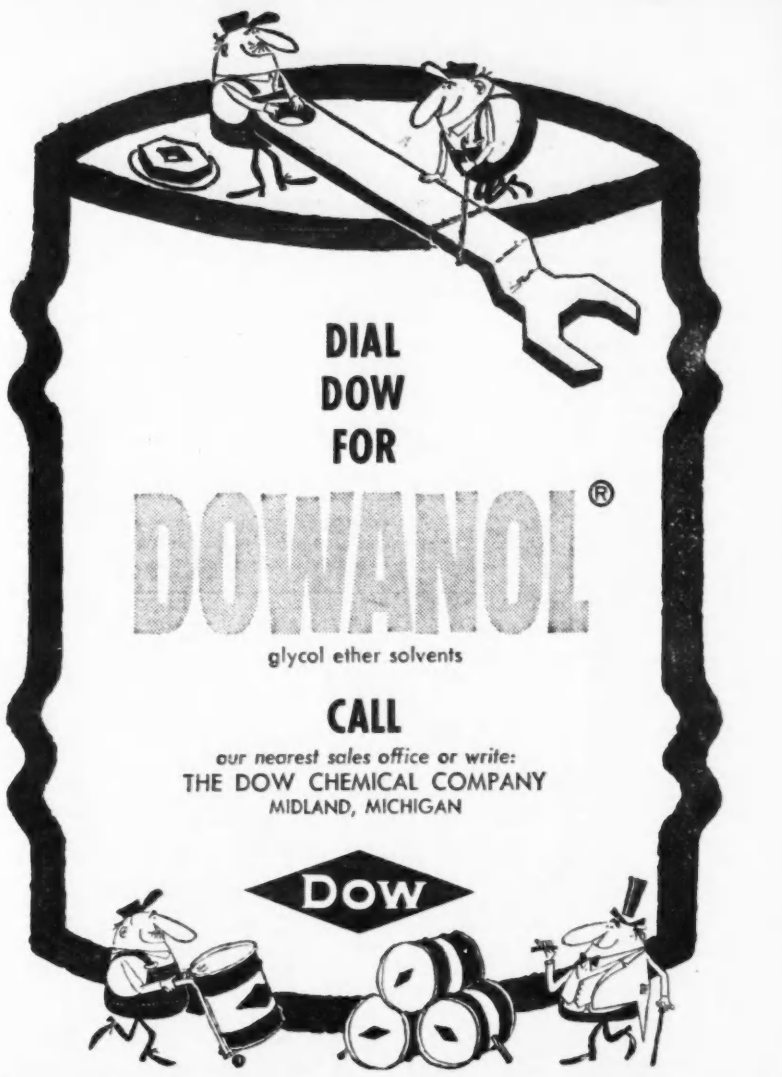
One of the first developments in antibiotic use in feeding farm animals was the marketing of American Cyanamid Company's **"Aureomycin"** chlortetracycline in feeding of swine. Developments since 1950 indicate that this antibiotic is beneficial when added to the feed of nearly all farm animals. Amounts as low as 10 ppm in the daily ration have increased growth on the average about 15-20 percent.

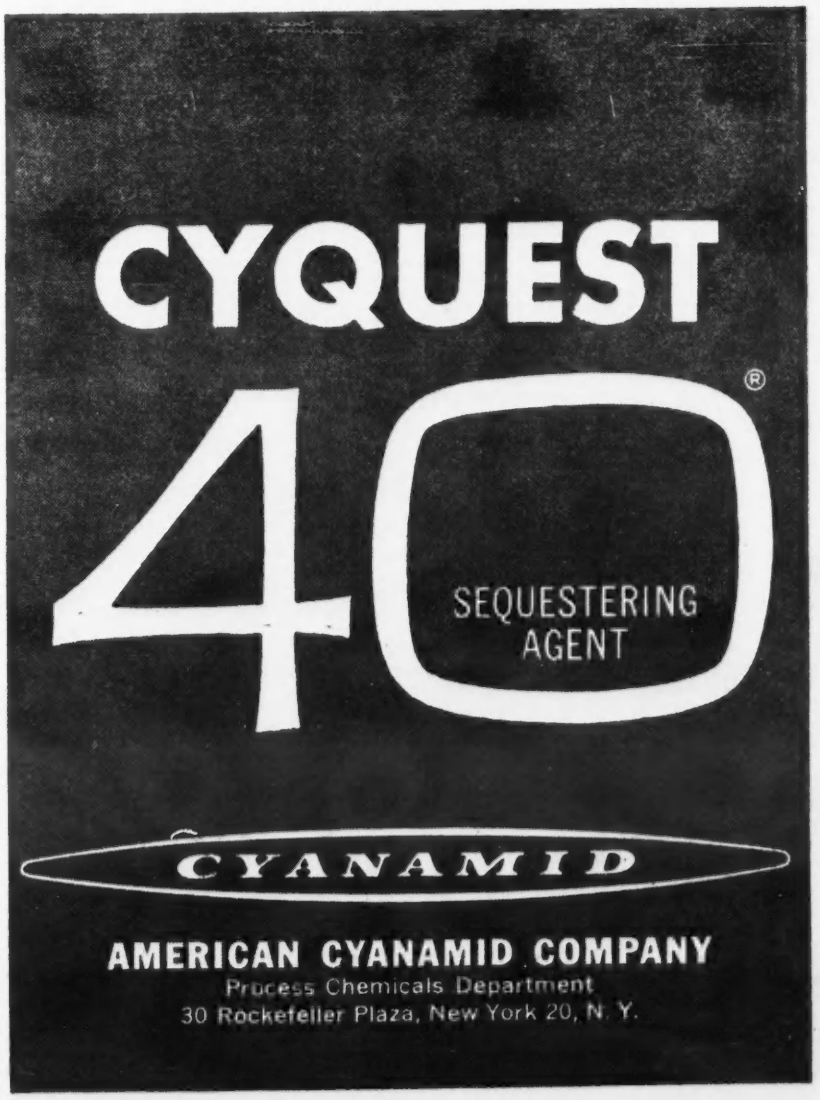
Ion Exchange Resins

The development of synthetic organic exchange resins in the mid-thirties has vastly increased the application potential of ion exchange processes. Although water treatment remains as the chief commercial application, improved resins and advanced technology of the ion exchange process has given the industry a valuable tool for chemical processing. Major factors in the widespread acceptance of these "giant molecules" for chemical processing work are improved stability and capacity of cation exchangers and development of strongly basic anion exchangers.

Dow Chemical Company offers three of the four basic types. **"Dowex 50"** and

—*Continued on page 71*





Laboratory Data Sheet

VITAMIN C

ROCHE

ASCORBIC ACID, U.S.P.
COATED ASCORBIC ACID—97.5%
SODIUM ASCORBATE

- The first to achieve commercial production of vitamin C by the famous Reichstein synthesis.
- Roche produces every useful type of ascorbic acid to meet virtually every manufacturing need.
- Single uniform lots as high as 3000 kilos, saving you assay costs.
- All types are uniform, readily soluble and easy to handle.
- Roche guarantees highest quality, held to rigid specifications.
- Quick delivery from strategically located warehouses.
- Packaged to protect original quality in sealed tamperpruf containers.

ASCORBIC ACID, U.S.P. Roche

TYPES	DESCRIPTION AND USES
GRANULAR TYPE 20-60	100% (±) passes through 20 mesh. 95% is retained on 60 mesh. Similar to granulated sugar in particle size. Satisfactory for direct addition to dried granulations.
FINE GRANULAR TYPE 40-80	100% (±) passes through 40 mesh. 95% is retained on 80 mesh. A free-flowing product similar to table salt in particle size. Recommended for tablet granulations where fine powder is considered less suitable because of denser packing.
SUPERFINE GRANULAR TYPE 60-100	100% (±) passes through 60 mesh. Approximately 25% remains on 100 mesh. 45-50% passes through 100 mesh and remains on 200 mesh. 25-35% passes through 200 mesh. A very fine free-flowing crystal suitable for dry gelatin capsules or tableting. Useful in dry mixtures, food supplements.
FINE POWDER TYPE 100	100% (±) passes through 100 mesh. Produced by grinding crystalline material. Non-abrasive on tableting dies. Widely used for granulations, solutions, food supplements. Minimizes fractionation of particles in dry mixtures.
ULTRA FINE (MICRO) POWDER TYPE 325	Minimum 99% through 100 mesh. Minimum 90% through 200 mesh. Milled extremely fine. Practically devoid of abrasive action on cutting dies. Screen tests above 200 mesh are unreliable because of variations in technique, equipment, humidity, static charges, etc. Sedimentation tests and measurement of particle size in microns reveal that 60-70% of Roche material is smaller than 44 microns (equivalent to 325 mesh).
AMPUL TYPE	Very fine crystals—easily dissolved. Minimum color. Specially produced and tested for use in parenteral solutions. See Roche technical brochure "Notes on Vitamin B_1 and Vitamin C Parenteral Solutions" for complete details.
TYPE F	Especially produced for use in the food industry. Free-flowing, will not dust or clump, dissolves easily. U.S.P. in quality. 100% through 50 mesh. 98-99% remains on 200 mesh.

COATED ASCORBIC ACID — 97.5% Roche

DESCRIPTION

Coated ascorbic acid 97.5% Roche is a fine, white, or nearly white powder. It is pure U.S.P. ascorbic acid powder coated with ethyl cellulose. The manufacture of coated ascorbic acid is licensed under Patent No. 2,410,417 to Roche and customers of Roche.

SPECIFICATIONS

Particle Size	100% through 16 mesh screen 75-92% through 40 mesh screen 45-80% through 60 mesh screen 35-60% through 100 mesh screen
Assay	Minimum 97.5% ascorbic acid
Identity test	Positive for ascorbic acid
Loss on drying	Negligible

USES AND DATA

Ethyl cellulose coated ascorbic acid Roche has these advantages in pharmaceutical tablet manufacture:

- Small size, high potency (250-500 milligrams) tablets of light color can be made from dry granulations with very little excipient.
- Aids in eliminating chipping and capping during compression.
- Retards discoloration, mottling during abnormal storage conditions.
- Reduces contact of ascorbic acid with reactive materials.
- Rapidly available in aqueous solution for assay.
- Provides a tablet with slower release of ascorbic acid, tending to reduce localized acidity sometimes experienced with high potency tablets.

FOOD MANUFACTURERS

- Manufacturers of cured meats can use this type to advantage for retarding smokehouse activity, and for better protection in spice mixtures. It may also provide longer protection of color and flavor during storage and display.

DATA ON PARTICLE FINENESS

Based on U.S.P. XV-pages 934-5; N.F. 10, pages 702-3; ⊕Lange's Handbook of Chemistry 9th Edition, page 911

The fineness of "powders" is described in both the U.S. Pharmacopeia and National Formulary in terms which are related to the number assigned to a standard sieve made of woven wire cloth. The size of wire, and sieve opening are standardized, together with permissible variation in both average and maximum openings.

Sieve Number	Sieve Opening in Microns	Sieve Opening Mm.	Permissible Variation in Average Opening Per Cent	Permissible Variation in Maximum Opening Per Cent	Wire Diameter Mm.
50	297	0.297	± 5	± 25	0.170-0.253
100	149	0.149	± 6	± 40	0.096-0.125
200	74	0.074	± 7	± 60	0.045-0.061
*325	44	0.044	± 5	± 60	0.036

Standards are established for defining the fineness of powdered chemicals, together with a technique for determining the uniformity of fineness. The types of powders described in the U.S. Pharmacopeia and National Formulary do not represent the full range of particle sizes commercially available. No procedure is given for the determination of particle size in the "ultra-fine" or "micro powder" range, sometimes referred to as No. 325. This requires a sedimentation method and measurement in microns. Ordinary sieving methods are inaccurate.

The variation possible in the standard sieves plus such variables as the motion applied to the screen and physical characteristics of the powder being screened affect accuracy and duplicability of screening tests. Particle size specifications based on mesh sizes must always be regarded as nominal rather than as strictly accurate limits of particle size and distribution.

SODIUM ASCORBATE** Roche

This is the sodium salt of ascorbic acid. It is available as an odorless, tasteless, anhydrous, fine white powder or fine granular substance.

The antiscorbutic activity is in molecular proportion to ascorbic acid, one milligram of the sodium salt being equivalent to 0.889 milligram of the acid, or one milligram of the acid equivalent to 1.124 milligrams of sodium ascorbate.

Highly soluble in water—62 grams/100 ml at 25°C, 78 grams/100 ml at 75°C. Aqueous solutions are unstabile, easily oxidized on exposure to air, or other factors which affect ascorbic acid.

The pH of a sodium ascorbate solution is from 5.6 to 7.+ as compared with a pure ascorbic acid solution at pH 2.3-2.5. The more neutral characteristic of the sodium salt recommends it for high dosage oral forms where gastric sensitivity to lower pH might be undesirable. It is useful in combination with ingredients which would react unfavorably under more acid conditions. Products can be buffered to a suitable pH by combining sodium ascorbate and ascorbic acid together.

Commercial forms of sodium ascorbate are not recommended for preparation of parenteral solutions. It is more satisfactory to prepare suitably buffered solutions of Roche ampul type ascorbic acid, using sodium bicarbonate according to the special Roche method described in our technical brochure, "Notes on Vitamin B_1 and Vitamin C Parenteral Solutions."

Sodium ascorbate is of value as an antioxidant for use in comminuted meats and in curing pickles for hams, bacon, and corned beef. Because it is the salt of ascorbic acid (vitamin C), a substance naturally occurring in meats and identified in the U.S. Pharmacopeia, it may be preferred to antioxidants in the "chemical additive" class.

ERYTHORBIC ACID and SODIUM ERYTHORBATE

For Antioxidant Use Only — No Nutritional Claim Can Be Made — Literature on Request

**Sodium erythorbate Roche (formerly sodium d-isoascorbate), antioxidant with virtually no vitamin C activity. A white, free-flowing crystalline material. Slightly less soluble than ascorbic compounds. When replacing ascorbic acid, 23% more should be used to obtain equal antioxidant activity and 8% more when replacing sodium ascorbate. These differences are due to the presence of both water of crystallization and sodium which are inactive.

Erythorbic acid Roche (formerly d-isoascorbic acid) — antioxidant. Similar to sodium erythorbate described above. Useful where acid reaction or absence of sodium is desirable. For equivalent antioxidant activity use 23% less than with sodium erythorbate, or the same amount as with ascorbic acid (vitamin C).

FINE CHEMICALS DIVISION • **HOFFMANN-LA ROCHE INC** • NUTLEY 10, NEW JERSEY

In Canada: Hoffmann-La Roche Limited, Vitamin Place, 1956 Bourdon Street, St. Laurent, Montreal 9, P.Q.

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(Reprints Available)

Drugs, Fine Chemicals

Three little words which simply mean competition is hellish will probably be turning up on printed schedules for certain vitamins in the not too distant future. These, if you haven't guessed already, are "Prices on Request." Not the best and surely not the easiest way for manufacturers to conduct their business, this traditional way of telling potential customers that the situation is fluid may, perhaps, be the only way right now. As people in both camps will tell you, keeping up with prices has become a formidable project.

Price flexibility is most noticeable in three markets: ascorbic acid ("C"), thiamine ("B_1")and pyrodoxine ("B_6"). "C," for example, was recently reduced twice in the course of a single week. Such action sometimes has a stabilizing influence but not here apparently. As opposed to the $7.35 a kilo (100 kilos) listing, rumor has it that a similarly large quantity can be bought for $6.90.

April 4, this column noted that thiamine was selling in the vicinity of $25 to $27 a kilo, pyridoxine at $110 to $115. Since then we have been advised by usually well-informed sources that small quantities of the vitamins may be going at these prices, but significant quantities—no. What's a significant quantity? About 25 kilos of thiamine, 10 kilos of pyridoxine.

Import volume of C, B_1 and B_6 is considerable. Best indication of this is that Customs is now listing imports of these vitamins individually, apart from the broad category—vitamins and vitasterols—where smaller volume items are lumped.

As is only natural, foreign material is priced lower than domestic manufacture. This wouldn't be so bad if US output wasn't adequate enough—even though requirements generally are expanding—to fill the total demand. But since it is, competition among domestic manufacturers as well as with importers is intense, and likely to remain so until some people, discouraged by the poor profit return at the very low price levels, decide to flee the scene.

Bismuth Salts—More on the bismuth salt price advances . . . Checking things out with the trade last week, it was learned that one basic manufacturer did not take any action on April 15. In fact, a spokesman for the firm indicated that no announcement would be forthcoming for another couple of weeks. And maybe not even then since he didn't rule out the possibility that the firm planned no action at all.

So as it stands now, two firms have issued new and higher schedules, a third is "waiting things out," and a fourth, referred to above, is "sitting tight."

Camphor—A note from abroad . . . A firm in India is joining with German interests to set up a synthetic camphor plant, to be located near either Bombay or Assam. The latter site is being considered, reportedly, because of its proximity to the right type of pine which would be used to produce turpentine, basic raw material in the manufacture of camphor.

But wherever the plant goes up, it is supposed to make India self-sufficient in synthetic camphor. The unit is to have a capacity of about 900 tons annually. In addition, it will turn out about 60 tons of thymol.

The 1,000 pounds of crude camphor imported here in February—all of it came from Japan—carried a duty of $4. The 3,200 pounds of refined a duty of $92. Incidentally, this material, as one might suspect, came from Taiwan (2,700 pounds) and Japan (500).

Synthetic camphor imports, totaling 138,050 pounds and valued at $50,558, bore a duty of $6,898.

Suppliers of synthetic camphor were the United Kingdom (110,850), and West Germany (27,200).

Gelatin—The Census bureau has just issued a summary report on gelatin for 1959. In some instances, figures differ from those appearing on individual monthly reports, causing the bureau to explain that revised figures were sometimes received from producers after the monthly report had been issued.

The government statistics were prepared from reports submitted by all known manufacturers producing gelatin. The geographic distribution, by states, of these producers, Census said, is: Illinois 2; Massachusetts 3; Michigan 1; Minnesota 1; New Jersey 2; New York 3; Wisconsin 1.

Production of gelatin in 1959 was 56,492,000 pounds. This compared with 54,007,000 in 1958; 56,585,000 in 1957; 55,470,000 in 1956, and 52,218,000 in 1955.

Of total '59 output, 8,760,000 pounds were derived from ossein, and 47,732,000 from hides. Classified by type, output was, in pounds: edible 39,191,000; technical 3,537,000; pharmaceutical 3,624,000; photographic 10,140,000.

Gelatin shipments in February were 58,401,000 pounds, appreciably higher than shipments in any of the four previous years. By type, shipments were, in pounds: edible 39,191,500; technical 3,366,000; pharmaceutical 3,609,000; photographic 10,151,000.

Going into 1960, gelatin producers held stocks amounting to 11,235,000 pounds, lower than inventories at any time during the previous year. At the beginning of '59, stocks were 13,144,000 pounds.

Classified by type, stocks at '59's end were, in pounds: edible 5,824,000; technical 821,000; pharmaceutical 1,022,000; photograhpic 3,568,000.

Getting down to the present situation . . . Trade people note that stocks are relatively small, prices firm and unlikely to change.

Monosodium Glutamate—The Japanese have developed a new process for making monosodium glutamate, using acrylonitrile as raw material in place of wheat or soybeans.

Tried and proved successful in pilot plant operations, the acrylo process will be used by Japan's leading manufacturer of food seasonings to turn out 300 tons of MSG per month, starting sometime in 1962.

The Japanese firm feels that the switch

Price Trends

Advanced
None

Reduced
None

Comparative Price Indexes
(100=1949 average)

Last week	Prev. week	Last month	April 24, 1959
60.36	60.36	60.35	60.85

For Current Prices See Page 11

Drugs and Fine Chemical Imports: February

Imports of selected drugs and fine chemicals for the months of January and February, 1960, as reported by the Bureau of Census, were as follows:

		February	*January*
Ascorbic acid	lbs.	37,026	41,444
Caffeine	lbs.	55,650	29,060
Camphor, crude	lbs.	1,000	2,500
Refined	lbs.	2,200	24,953
Synthetic	lbs.	138,050	52,600
Iodine, crude	lbs.	188,537	59,855
Menthol:			
Natural	lbs.	51,561	59,631
Synthetic	lbs.	4,405	22,052
Pyridoxine hydrochloride	lbs.	1,697	220
Quinidine and salts	ozs.	49,962	46,517
Quinine sulfate	ozs.	0	0
Saccharin	lbs.	6,364	8,200
Sodium alginate	lbs.	22,410	5,000
Tartaric acid	lbs.	423,463	160,501
Thiamin hydrochloride and mononitrate	lbs.	2,286	3,527
Theobromine	lbs.	1,351	9,751
Vitamins and vitasterols, n.e.c.	lbs.	46,003	28,365

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Dihydrotachysterol

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YELLOW — RED — ORANGE

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Hickory Smoked Yeast
Primary (Torulopsis utilis) Brewers' (Sacchromyces cerevisiae)
Powders — Flakes — Extracts — Concentrates — Hydrolysates
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Registered Trade Mark

TANNIC ACID GALLIC ACID
(U.S.P. and Technical Grades)

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THE HARSHAW CHEMICAL CO.
CLEVELAND 6, OHIO

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Drugs, Fine Chemicals

to petroleum-derived acrylonitrile will permit higher productivity at lower cost. This is because conventional fermentation and extraction from wheat or soybeans produce relatively low yields and are economically dependent on sales of by-product starch and amino acid.

The new process will start with the conversion of acrylonitrile into a aldehyde by reaction with oxygen in a solvent, using an undisclosed catalyst. The aldehyde will then be reacted with methane and ammonia to produce a compound that can be hydrolysed to racemic glutamic acid, which is extracted to produce MSG.

Penicillin — Synthetic penicillin producer No. 4 debuted last week, giving the trade a new word to add to its jargon, "Alpen."

Like the three synthetics previously announced—"Syncillin," "Maxipen," "Chemipen"—"Alpen" is an oral antibiotic said to provide blood levels twice as high as do fermentation forms. And appropriately enough, "Alpen," calling to mind Mt. Blanc and the snow-capped peaks of the Alps, signifies this "high concentration."

It will be interesting to follow the marketing of these four synthetics, virtually similar in all but tradename, to see if the names chosen for the drugs have any significance sales-wise, and to see which of the four becomes an everyday household word.

HEAD OF SALES: David W. Lynch, appointed general sales manager of Vulcan-Associated Container Companies, Birmingham, Ala.

Procaine Hydrochloride—A major producer of procaine hydrochloride recently announced new and higher prices for the chemical, higher, that is, than actual trading prices of late but—and let's be frank—considerably lower than those quoted officially by others in the business.

In the interim, a second manufacturer of the anesthetic drug has indicated that it intended to revise its schedule accordingly. A third maker has not taken any action as far as this column knows.

New prices are: Antibiotic grade $2.25 a pound for 2,000 pounds; Ampoule grade, $2.40 a pound for 1,000 pounds, $2.45 a pound for 500 pounds; and $2.50 a pound for 100 pounds.

Tartaric Acid—The situation seems pretty normal throughout the tartaric market. Demand is reported routinely good, supplies fully adequate. Rumored: price competition.

Imports of tartaric acid in February totaled 423,463 pounds. Value was $141,803, and the duty, as calculated by Customs, was $25,402.

Vitamins — February imports of vitamins, as reported by the Census bureau, were:

Ascorbic Acid ("C"): 37,026 pounds, valued at $130,347. Calculated duty: $13,680. Shipping here were Denmark 16,514 pounds, valued at $46,065; Japan 14,330 pounds at $56,755; France 2,876 pounds at $9,666; Austraila 2,204 pounds at $14,791; and Switzerland 1,102 pounds at $3,070.

Pyridoxine ("B_6"): 1,697 pounds, valued at $74,108. Calculated duty was $7,778. Shipping here were Japan 1,210 pounds at $51,806; and the United Kingdom 487 pounds at $22,302.

Thiamine ("B_1"): 2,386 pounds, valued at $25,598. Duty: $2,685. Shipping here were the Canal Zone 1,102 pounds at $13,303; Denmark 843 pounds, at $7,895; and Panama 441 pounds at $4,400.

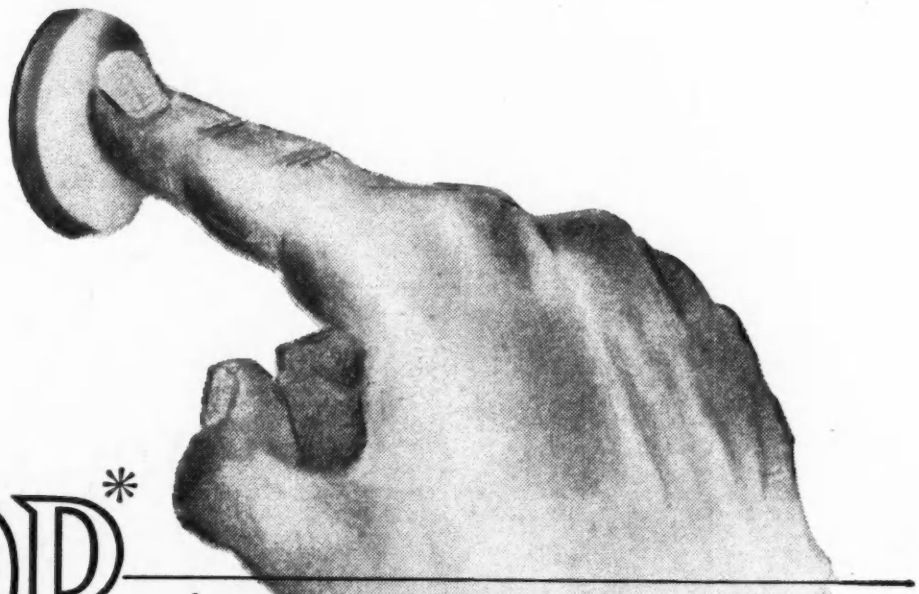
Vitamins and vitasterols not specifically classified: 46,003 pounds, valued at $268,889. Duty: $28,205. Shipping here: Denmark 11,784 pounds; The Netherlands 11,732; Spain 5,996; France 5,568; Switzerland 4,427; United Kingdom 3,543; Taiwan 1,152; West Germany 621; Canada 600; Italy 220; and India 140.

Botanicals

Collections of domestic botanicals are under way and, according to some dealers, it will be possible to appraise the likely availability of new crop materials within a few weeks. First botanicals to arrive will be those off the trees—wild cherry bark, witch hazel leaves and such like. Roots and herbs come later in the season.

For imported botanicals generally, the market is just routine. No significant price changes have been recorded and, as one trade source puts it, anything one can buy can be replaced.

In better than average demand, reportedly, are such items as gum arabic, agar, barberry root bark and juniper berries.



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One of the most misguided ideas is the concept that "custom manufacturing" is a last resort of production executives in times of hopeless crisis.

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Whether in your own plant or in ours, successful processing depends upon early planning. From the start, due regard must be given to the ultimate payoff – economical volume production of a uniform, quality product. Late-stage process modifications lose precious time. If the product is a pharmaceutical and the process used for clinical materials is part of the NDA, changes are difficult to make.

If you anticipate the need for production assistance, call upon Penick as early as possible. Your inquiry will be handled at the highest level, in strict confidence, and you'll value the contribution we can make.

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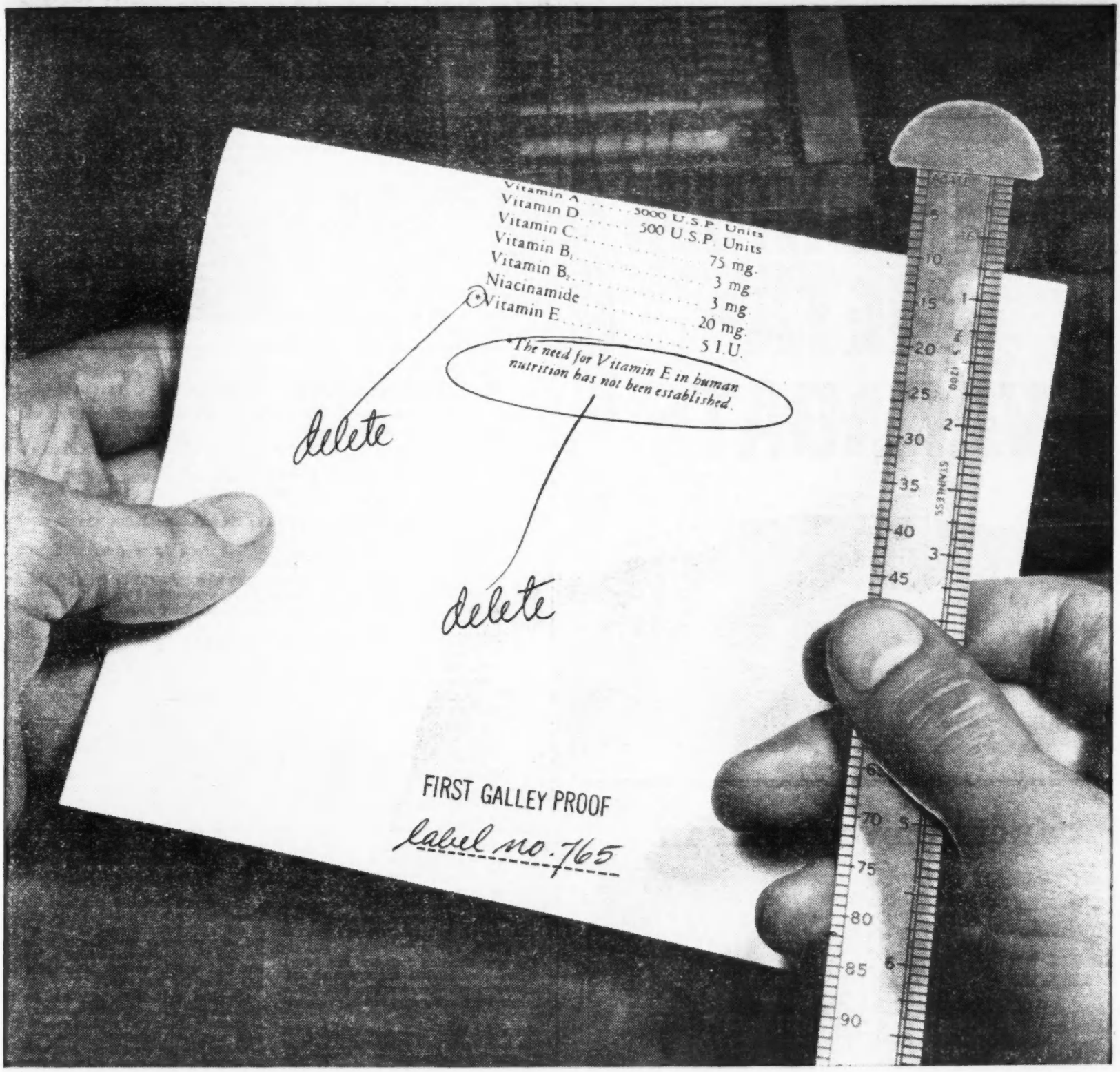

This comes out now

The new official status of vitamin E* makes it no longer necessary to indicate on labels that the need for vitamin E in human nutrition has not been established. That's a job to attend to with the printer.

The job we'd like is providing technical assistance to the drug manufacturer who sees reason, in the new status of vitamin E, for reviewing his multivitamin formulations. Should you like to discuss this further, or see information on any of the vitamin E products listed at the right, get in touch with ***Distillation Products Industries,*** Rochester 3, N. Y. Sales offices: New York and Chicago • W. M. Gillies, Inc., West Coast • Charles Albert Smith Limited, Montreal and Toronto.

*Federal Register, October 29, 1959, Page 8792

1. *Mixed Tocopherols Concentrate N. F.*—A favorite for soft-shell capsules ever since pharmaceutical practice adopted a standard ingredient to represent the tocopherols found in nature. Type 4-34 has a biological potency of 253 I.U. per gram; Type 4-50 delivers 372 I.U. per gram. Provides antioxidant activity as well as vitamin E activity.

2. d-*Alpha Tocopheryl Acetate Concentrate N. F.*—To meet your label claim of vitamin E unitage in a volume of oil you choose for manufacturing convenience. Can withstand atmospheric oxygen. Type 6-25 provides 340 I.U. per gram; Type 6-35 delivers 476 I.U. per gram.

3. d-*Alpha Tocopheryl Acetate N. F.*—Type 6-100 gives maximum dosage in minimum oil. Highest biopotency of any commercial vitamin E preparation—1360 I.U. per gram.

4. *Crystalline* d-*Alpha Tocopheryl Acid Succinate*—Dense, smooth-flowing powder for tablets and dry-fill capsules. 1210 I.U. per gram.

5. *Dry* d-*Alpha Tocopheryl Acetate, Type* 333—Can be incorporated into tablet granulations before or after wet granulating procedures; disperses in water. A gram contains 245 mg. of d-alpha tocopheryl acetate, equivalent to 333 I.U. of vitamin E.

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Enzyme Use Seen Spurred to $60 Million

OPD Special Report on Industrial Enzymes

—Continued from page 48

centrates, grape juice and concentrates—and many other uses in the fruit processing industry.

Rohm & Haas is conceded to have the major share of the pectinase market. The company is naturally mum on either present market size or future potentials.

Protease and amylase enzymes are used in baking. To give an idea of the size of this market: Over 12 billion loaves of bread are baked annually, and at least three out of every five loaves (some observers say more) employ industrial enzymes.

In baking, these enzymes act on the starch and protein of the flour, causing more rapid fermentation and uniform sponge behavior. Further, they make for crumb softness and longer shelf life.

Best guess of the industry is that this business is worth around $200,000. Aside from breads, the enzymes are used in the production of soda crackers and various sweet goods.

The dry cleaning industry has found enzymes very helpful for spot removal. Mixtures of protease, amylase and lipase enzymes are usually supplied in combination.

These mixtures will attack and solubilize food spots and other stains so that they may be easily removed. This business is rated at about $200,000 annually now, but is on the decline.

One reason for an anticipated fall-off in demand is the development of more effective dry cleaning solvents. Another: the rise of synthetic fibers, to which proteinaceous spots do not cling as fast as they do to cotton.

Miscellaneous food and Industrial uses are legion. Among the most important at present are production of fish solubles, which R&H has pretty much to itself, and distilled beverage output (where malt is used largely now, but where microbiological enzymes show great promise).

In the candy industry, enzymes fill a very important function: They are responsible for the gooey centers in candies; they go into fondants and hard candies, and help in the manufacture of cocoa syrups.

Some new vistas include enzymatic production of dextrose (Japan is said to be doing it now), and encroachment on the malt business by microbiologically-derived materials.

In fact, one of the goals of the industrial enzyme producers is to supplant in large part vegetable and animal-derived materials with the more rigidly-controlled microbiologicals.

Fungal and bacterial enzymes, it's believed, can grow $1 million at the expense of malt, plant and animal materials. The industry concedes it's slightly more expensive to use microbiological enzymes—but that quality control advantages will pay off in the long run.

Overseas markets for enzymes are not too clearly defined. Chill-proofers are apparently the largest volume export from this country. However, producers are active in foreign countries. Just recently, in fact, Japanese enzymes have been offered for sale in the US.

Opinions of domestic producers vary on the possible influences of imports. Some express unconcern, while others are frankly worried about the possible competitive influence. It's held more than likely that the domestic enzyme producers will hang onto their share of the market.

Aside from Rohm & Haas, Wallerstein Company and Fermco there are many pro-

Enzyme Reprints Available Shortly

OPD's special "in-depth" report on enzymes is being reprinted and will be available shortly. These sixteen previous studies are also still in print:

"BROMINE GROWTH IS PROMISING: But Ethylene Dibromide Is Baffling."
"BHC FIGHTS MANY FOES: Market Woes, Weevils Conspire."
"METHYLAMINES MARKET POSERS: DuPont's Moves Hold the Answers."
"PHTHALIC ANHYDRIDE'S STORY: Naphthalene Holds the Key to Growth."
"SODIUM SULFATE OUTLOOK: Will Output Jump Another 200,000 Tons?"
"OPTICAL BRIGHTENERS: Why There May Be Gold in Paper."
"ACETONE'S OUTPUT RISE: Calm Surface, Troubled Depths."
"MALEIC ANHYDRIDE EXPANSION: Is Industry Capacity Going Amok?"
"LYSINE MONOHYDROCHLORIDE: Sales to Multiply 25 Times in Three Years."
"DDT MARKET'S BIG POSER: Does Mexican Output Spell Trouble?"
"ULTRAVIOLET ABSORBERS: Lighting the Way to $10 Million Market."
"DOP, DIOP VOLUME RISES: But the Profit Squeeze Continues."
"BUTADIENE CONVALESCES: Industry Recovers from Poor '58."
"STYRENE MONOMER'S STORY: The Industry's Three Big Questions."
"CHELATING AGENTS: A Phenomenon Has Growing Pains."
"TITANIUM PIGMENT: Why Producers Scoff at Recession."

Reprints of the seventeen articles may be obtained at 35 cents a copy (discounts on quantities of a hundred) from OIL, PAINT AND DRUG REPORTER'S Reprint Department, 30 Church Street, New York 7.

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IN MANUFACTURING POST: Walter N. LaPorte, engaged by Stepan Chemical Company, Chicago, as director of manufacturing for the industrial chemicals division. He had previously been with Monsanto Chemical Company and Sun Oil Company.

OPD Special Report

ducers of enzymes, either on a commercial or laboratory scale in this country. They include:

Takamine Laboratory, a division of Miles Laboratories, Inc., said to be the oldest producer of enzymes in this country; R. T. Vanderbilt Company, and Nopco Chemical Company.

Also, Paul-Lewis Laboratories; Wilson Laboratories, a division of Wilson & Co.; Armour Pharmaceutical Division of Armour & Co.; Standard Brands, Inc.; Pabst Brewing Company, and S. B. Penick & Co.

Others include Worthington Biochemical Corporation; Schwarz Laboratories, Inc.; Vita-Zyme Laboratories, Inc.; as well as a number of drug houses offering various preparations—such as Parke, Davis & Co. and Pitman-Moore division of Allied Laboratories, Inc.

Rohm & Haas is believed generally to have the largest share of the enzyme market, with Wallerstein not far behind. Takamine is judged third, and it's a scramble for position from there on down the line.

But no matter what the present sales volumes of all the enzyme producers, they hope to garner even larger returns from future developments in the market.

Such an acvhievement as that recently reported on by E. I. duPont de Nemours & Co., the fixing of nitrogen from the air via enzymes—as blue-sky as it might seem at present—could have tremendous industrial potential in the future.

The fact is that enzymes are the most efficient catalysts known to man. Their producers know it, and intend to reap the benefits of their knowledge.

Kaiser Unit

—Continued from page 3

under way last summer, is tabbed at $3 million.

Principal feedstock for the plant is magnesium hydroxide in slurry form furnished by Dow Chemical Company's Midland plant.

The periclase—a crystalline hard-burned magnesia used in the manufacture of basic refractory brick and mixes—will be shipped to Kaiser's Columbiana, Ohio, plant, which has been expanded to accommodate the new output.

"We are gearing up to meet the challenge of the '60's," says Frank M. Cashin, vice-president and division manager.

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WATER SOLUBLE GUMS	
WHITE PINE BARK	
ARNICA	

If you work with botanicals or gums, you'll find Meer technical bulletins useful. They offer you complete information on product forms available, action and uses, history and specifications. To receive copies fast, simply check the ones you want, clip the ad, attach to your letterhead and drop in the mail. If you'd also like to receive new Meer bulletins as they come out, simply let us know and we'll be glad to add your name to our mailing list.

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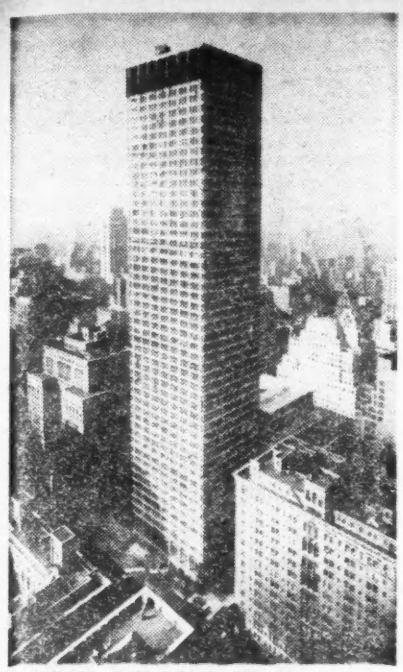
*Wallerstein's trademark for its specially purified brand of tyrocidine HCl.

IMPORTS at United States Ports

New York

ACETIC ACID—44 dms, Fallek Products Co, Hamburg
AGAR—140 bgs, Casablanca
ALOE—11 cs, Meer Corp, Ciudad Trujillo
10 cs, Djibouti
ALUMINUM FORMATE—35 dms, Rotterdam
ALUMINUM OXIDE—50 bgs, F D Davis Co, Hamburg
AMINOACETIC ACID—37 dms, Chemo Puro Manufacturing Corp, Hamburg
AMMONIUM CARBONATE — 50 dms, Chemical Manufacturing Co, Liverpool
AMMONIUM CHLORIDE—200 bgs, Chemical Manufacturing Co, Liverpool
ANILINE DYES—9 dms, Heemsoth Kerner, Liverpool
37 dms, Sandoz Inc, Havre
37 dms, Hensel Bruckmann & Lorbacher, Bremen
85 dms, Carbic Hoechst Corp, Rotterdam
31 dms, Geigy Chemical Corp, Bremernaven
22 dms, Havre
ANNATTO SEED—400 bgs, D Steengrafe & Co, Guayaquil
50 bgs, H Marmorek & Son, Rio de Janeiro
100 bgs, Chase Manhattan Bank, Progreso
170 bgs, H Kohnstamm & Co, Kingston
30 bgs, D Steengrafe & Co, Kingston
ANTIMONY OXIDE—437 bgs, National Lead Co, Liverpool
ARABIC GUM—158 bgs, S B Penick & Co, Port Sudan
600 bgs, Morningstar Paisley Inc, Port Sudan
250 bgs, T M Duche & Sons, Port Sudan
400 bgs, Stein Hall & Co, Port Sudan
157 bgs, Colony Import & Export Corp, Port Sudan
500 bgs, Bank of N Y, Port Sudan
13 bgs, Morningstar Paisley Inc, Lagos
405 bgs, Irving Trust Co, Port Sudan
500 bgs, National City Bank, Port Sudan
100 bgs, Bankers Trust Co, Port Sudan
456 bgs, Port Sudan
ARSENIC, WHITE—120 bbls, American Smelting & Refining Co, Tampico
ASBESTOS FIBER—3,600 bgs, Johns Manville Corp, Durban
BALSAM—5 dms, Magnus, Mabee & Reynard, Cristobal
10 cs, Meer Corp, Cristobal
5 dms, De Sola Bros, Cristobal
BARBASCO ROOT—251 bls, Prentiss Drug & Chemical Co, Callao
BEESWAX—44 bgs, D Steengrafe & Co, Havana
46 bgs, Baldini & Co, Tampico
25 bgs, Machado & Co, Ciudad Trujillo
330 blks, Lobito
22 bgs, Havana
37 bgs, Tampico
50 bgs, Puerto Plata
BENZOIN GUM—20 cs, Meer Corp, Singapore
BLANC FIXE—30 cks, C J Osborn Co, Rotterdam
800 bgs, C J Osborn Co, Rotterdam
BONE BLACK—80 bgs, Martin Baer & Co, Lisbon
BONE CHARCOAL—200 bgs, Martin Baer & Co, Lisbon
CALCIUM CARBONATE—360 bgs, J T Baker Chemical Co, London
600 bgs, Hammill & Gillespie, Hull
1,000 bgs, Smith Chemical & Color Co, Hull
1,400 bgs, N H Weitzner, Antwerp
600 bgs, Pluess Staufer, Antwerp
CALCIUM HYPOCHLORITE—50 dms, Yokohama
CALCIUM NITRATE—500 bgs, McKesson Robbins, Oslo
CALCIUM PHOSPHATE, DIBASIC—360 bgs, Wessel Duval & Co, Antwerp
CAMPHOR—25 cs, Chase Manhattan Bank, Keelung
CANDELILLA WAX—375 bgs, Tampico
CAPRIC ACID—73 dms, Balfour Guthrie, Liverpool
CARAWAY OIL—2 dms, Rotterdam
CARAWAY SEED—100 bls, Levy & Levis Co, Rotterdam
300 bgs, Rotterdam
CARDAMOM—7 cs, R T French, London
40 cs, K Landes & Co, Cochin
22 cs, K Landes & Co, Colombo
CARNAUBA WAX—556 bgs, Frank B Ross, Fortaleza
122 bgs, Cornelius Wax Refining Corp, Fortaleza
245 bgs, J W Hanson, Fortaleza
56 bgs, Wm Diehl & Co, Fortaleza
112 bgs, Smith Nichols, Fortaleza
188 bgs, Bank of London & S A, Tutoia
63 bgs, Empire Trust Co, Tutoia
125 bgs, Colonial Trust Co, Tutoia
125 bgs, Irving Trust Co, Tutoia
375 bgs, Marine Midland Trust Co, Tutoia
201 bgs, Fortaleza
158 bgs, Tutoia
CASEIN—620 bgs, F C Gerlach, Buenos Aires
1,900 bgs, Tupman Thurlow, Buenos Aires
4,200 bgs, Buenos Aires
1,017 bgs, Hamburg
1,500 bgs, Eugenio Lang, Buenos Aires
1,000 bgs, P A Dunkel, Buenos Aires
400 bgs, A Wattis & Co, Auckland
CASHEWNUT SHELL LIQUID—63 dms, Brazil Oiticica Inc, Fortaleza
50 tons, Mangalore
CASSIA—375 bls, R J Spitz, Saigon
CASTOR OIL—474 tons, Baker Castor Oil Co, Bombay
428 tons, Wallace & Tiernan, Bombay
293 tons, Spencer Kellogg, Bombay
300 tons, Recife
CELERY SEED—174 bgs, Frank Tea & Spice Co, Bombay
174 bgs, C Czarinkow, Bombay
85 bgs, Louis Furth, Bombay
261 bgs, Otto Gerdau, Cochin
CHLORINATED RUBBER—800 bgs, C M C Chemical Inc, Liverpool
CITRON OIL—6 hf cs, Messina
CITRONELLA OIL—25 dms, Givaudan Corp, Keelung
25 dms, L A Champon & Co, Keelung
28 dms, George Uhe Co, Keelung
CITRONELLA OIL—25 dms, Giaudan Corp, Keelung
CLAY, CHINA—2,688 bgs, Anglo American Clay Corp, Avonmouth
CLOVE OIL—7 dms, Djibouti
COBALT OXIDE—60 cks, Antwerp
COCONUT OIL—387 tons, American Trust Co, Cebu
400 tons, Procter & Gamble Co, Colombo
CODLIVER OIL—166 dms, Scandinavian Oil Co, Reykjavik
11 dms, Frank Samuel & Co, Reykjavik
COPAL GUM—250 bgs, S Winternourne & Co, Matadi
CORIANDER SEED—500 bgs, Transit Import Export Corp, Casablanca
250 bgs, Levy & Levis Co, Casablanca
300 bgs, Louis Furth, Casablanca
200 bgs, K H Landes & Co, Casablanca
CORN STARCH—2,204 bgs, Impex Agricultural Corp, Rijeka
1,900 bgs, Geismar & Co, Bremen
1,120 bgs, Antwerp
400 bgs, Rotterdam
CRESOL—2 dms, Riches Nelson, Hamburg
CRESYLIC ACID—120 dms, Van Oppen & Co, Avonmouth
77 dms, Tar Residuals Inc, Liverpool
CUMIN SEED—800 bgs, Damon Trading Co, Khorramshahr
600 bgs, Chase Manhattan Bank, Khorramshahr
309 bgs, Curacao Trading Co, Khorramshahr
400 bgs, American Trust Co, Khorramshahr
214 bgs, Iran Pistachio Co, Khorramshahr
1,100 bgs, Khorramshahr
CUTTLEFISH BONE—100 cs, D Young, Yokohama
150 cs, D Young, Kobe
DAMMAR GUM—134 bgs, S Winterbourne & Co, Singapore
232 bgs, O G Innes Corp, Singapore
140 bgs, Singapore
DEGRAS—25 dms, Midwest Overseas Trading Corp, Liverpool
36 dms, Olympic Shipping Co, Liverpool
93 dms, Lanaetex Products, Nagoya
DEXTRIN—200 bgs, Stein Hall & Co, Rotterdam
300 bgs, Morningstar Paisley Inc, Rotterdam
350 bgs, Rott
DICYANDIAMIDE—100 bgs, Philipp Bros Chemicals, Bergen
DYES, COALTAR—40 dms, L & R Organic Products Co, Genoa
16 dms, C A Haynes, Havre
97 dms, H Bruckmann & Lorbacher, Hamburg
20 dms, Orlex Dyes & Chemical Corp, Hamburg
149 dms, Toms River Cincinnati Chemical Corp, Rotterdam
61 dms, Caldwell & Co, Hamburg
EARTH COLORS—625 bgs, Naftone Inc, Bremen
50 dms, Fezandie & Sperrle, Rotterdam
1,760 bgs, United Ultramarine & Chemical Co, Rotterdam
EPHEDRINE HYDROCHLORIDE—10 dms, Burroughs Welcome & Co, London
ETHYL CROTONATE—1 cs, Burroughs Welcome & Co, London
EUCALYPTUS OIL—5 dms, Norda Essential Oil & Chemical Co, Santos
FENUGREEK SEED—110 bgs, Casablanca
GARLIC OIL—5 cs, Magnus Mabee & Reynard, Yokohama
GELATIN—93 bbls, Riches Nelson, Antwerp
161 bbls, Coignet Chemical Co, Antwerp
15 cs, Coignet Chemical Co, Antwerp
15 bls, Coignet Chemical Co, Antwerp
100 bgs, T M Duche & Sons, Gothenburg
700 bgs, Transatlantic Animal By Products Corp, Rotterdam
300 bgs, H Bruckmann & Lorbacher, Rotterdam
400 bgs, T M Duche & Sons, Antwerp
300 bgs, King Shipping Co, Rotterdam
300 bgs, King Shipping Co, Hamburg
330 bgs, Transatlantic Animal By Products Corp, Hamburg
400 bgs, B Young, London
200 bgs, Transatlantic Animal By Products Corp, Vera Cruz
50 bgs, T M Duche & Sons, Rotterdam
100 cks, Havre
GERANIUM OIL—7 dms, J Manheimer, London
4 dms, Hollander Trading Corp, Algiers
4 dms, A Chiris Co, Algiers
2 dms, Cannes
GHATTI GUM—228 bgs, Provident Tradesman Bank, Bombay
GINGER—160 bgs, M J Golombeck, Cochin
157 bgs, K H Landes & Co, Cochin
190 bgs, Frank Fehr & Co, Freetown
GINGER—22 bgs, Mincing Trading Corp, London
347 bgs, Lagos
366 bgs, Freetown
GLUE—500 bgs, Jung Forwarding Co, Liverpool
600 bgs, Jung Forwarding Co, Avonmouth
800 bgs, Manhattan Adhesives Corp, Rotterdam
500 bgs, First National Boston, Hamburg
GLUE, BONE—550 bgs, First National Boston, Rotterdam
GLYCERYL MONOSTEARATE—2 kgs, Yardley of London, Southampton
GRAPHITE—2,000 bgs, Asbury Graphite Mills, Trondheim
450 bgs, Asbury Graphite Mills, Hong Kong
500 bgs, Asbury Graphite Mills, Colombo
600 bgs, Asbury Graphite Mills, Bremen
GUAR GUM—1,300 bgs, Stein Hall & Co, Karachi
500 bgs, Wedeman & Godknecht, Genoa
60 bgs, S B Penick & Co, Genoa
2,700 bgs, Stein Hall & Co, Bombay
HOOF & HORNMEAL—200 bgs, Rio de Janeiro
IRON OXIDE—1,304 bgs, Reichard Coulson, Malaga
IRON POWDER—27 dms, H Bruckmann & Lorbacher, Rotterdam
ISOSACCHAROL—4 cs, Export Import Services, Yokohama
JAPAN WAX—25 cs, Mitsubishi International Corp, Kobe
KARAYA GUM—364 bgs, Stein Hall & Co, Bombay
125 bgs, Colony Import & Export Corp, Bombay
66 bgs, P A Dunkel, Bombay
62 bgs, Nehls & O'Connell, Bombay
122 bgs, Morningstar Paisley, Inc, Bombay
61 bgs, Block Drug Co, Bombay
127 bgs, Meer Corp, Bombay
57 bgs, Wm M Allison & Co, Bombay
KELP—224 bgs, S B Penick & Co, Bergen
KOLA NUTS—147 bgs, D Steengrafe & Co, Kingston
27 ogs, Kingston
LABADANUM GUM—6 cks, L A Champon & Co, Barcelona
LACTOSE—10 dms, R J Saunders & Co, Rotterdam
LAVANDIN OIL—2 cks, Lo Curto & Funk, Cannes
40 cks, Bertrand Freres, Cannes
LAVENDER OIL—5 dms, Coutin Associates, Marseille
8 dms, Chartered Bank of N Y, Alicante
LEAD NITRATE—20 cks, Aceto Chemical Co, London
LEMON OIL—10 dms, Lo Curto & Funk, Vera Cruz
8 dms, Ungerer & Co, Vera Cruz
2 dms, Havana
LEMONGRASS OIL—56 dms, International Flavors & Frangrances Inc, Cochin
6 dms, George Uhe Co, Cochin
LIME OIL—1 dm, Citrus & Allied Essential Oils Co, Puerto Plata
1 dm, P H Petry, Port Au Prince
2 dms, Port Au Prince
LIVERMEAL—858 bgs, H S C Trading Co, Buenos Aires
LITHARGE—184 dms, Eagle Picher Co, Tampico
LOCUST BEAN GUM—200 bgs, Meer Corp, Portimao
500 bgs, J L Quesada, Portimao
100 bgs, P A Dunkel, Rotterdam
340 bgs, T M Duche & Sons, Genoa
325 bgs, Stein Hall & Co, Genoa
LOGWOOD EXTRACT—40 dms, American Dyewood Co, Kingston
MAGNESITE—24 kgs, Manufacturers Trust Co, Hamburg
10 kgs, Madison-Lewis Inc, Hamburg
MAGNESIUM CARBONATE—60 cs, Chas L Huisking & Co, Genoa
MANDARIN OIL—10 cs, Messina
MELAMINE—182 bgs, Gothenburg
MENTHOL—125 cs, Mitsui & Co, Santos
250 cs, Schwabach & Co, Santos
15 cs, P A Dunkel, Kobe
12 cs, Keelung
307 cs, Santos
MERCURIC OXIDE, YELLOW—23 cs, D Hauser, Bilboa
133 ams, Lo Curto & Funk, Rijeka
MERCURY—100 flks, Metal Chemical Commercial Corp, Rijeka
100 flks, National City Bank, Coquimbo
49 flks, Grace Ore & Mining Co, Callao
600 flks, F W Berk & Co, Cadiz
700 flks, Cadiz
3-METHOXYPROPYLAMINE—10 cs, Biddle Sawyer Corp, Hamburg
MOLASSES—555 tons, W R Grace & Co, Salaverry
14,155 tons, Instituto Cubano de Est del Azugar, Nuevitas
1,839 tons, Havana
MUSK, ARTIFICIAL—23 dms, Lo Curto & Funk, Rotterdam
MYROBALANS EXTRACT—360 bgs, Tanimex Corp, Hull
MYRRH GUM—10 bgs, Aden
NAPHTHALENE—1,757 bgs, Allied Chemical Corp, Hull
400 bgs, J N Forker, Hull
1,000 bgs, International Chemical Corp, Gdynia
2,201 bgs, Witco Chemical Co, Liverpool
1,792 bgs, J N Forker, Liverpool
NAPHTHENIC ACID—180 dms, Imperial Oil Co, Barranquilla
NAPHTHOL—4 dms, H Bruckmann & Lorbacher, Bremen
NICOTINE ALKALOID—11 dms, Black Leaf Products Co, Liverpool
NUTMEG—280 bgs, Lo Curto & Funk, Rotterdam
24 bgs, Gillespie & Co, Port of Spain
7 bgs, Lo Curto & Funk, Rotterdam
8 bgs, Rotterdam
OAKMOSS EXTRACT—1 cs, Lo Curto & Funk, Hamburg
OITICICA OIL—300 tons, Brazil Oiticica Inc, Fortaleza
OLEYL ALCOHOL—31 dms, A & S Corp, Yokohama
OLIBANUM GUM—67 bgs, Massawa
OLIVE OIL—49 dms, National City Bank, Malaga
241 dms, Swiss Credit Bank, Malaga
49 dms, Hanover Bank, Malaga
50 dms, Morgan Guaranty Trust Co, Seville
300 dms, Manufacturers Trust Co, Seville
100 dms, Societe General, Seville
148 dms, National City Bank, Seville
75 dms, Hanover Bank, Seville
25 dms, J Ossola Co, Genoa
97 dms, Malaga
275 dms, Seville
ORANGE OIL—1 dm, Citrus & Allied Essential Oils Co, Puerto Plata
OREGANO LEAVES—100 bgs, H Marmorek & Sons, Piraeus
400 bgs, M J Golombeck, Piraeus
OXBILE—2 dms, Reheis Co, Montevideo
PALM OIL—1,065 tons, Balfour Guthrie, Matadi
PALMKERNEL OIL—388 tons, Procter & Gamble Co, Matadi
PAPAIN—30 cs, National City Bank, Matadi
100 dms, Kedvale Pharmacal Co, Matadi
50 cs, I Levine, Colombo
PAPRIKA—100 bgs, Archibald & Kendall, Hamburg
200 bgs, Meer Corp, Hamburg
PAPRIKA—50 bgs, Van Loan & Co, Rotterdam
100 bgs, A A Sayia, Alicante
25 bgs, J Weinstein, Alicante
1,150 bgs, Alicante
PAPRIKA EXTRACT—5 dms, Alicante
PATCHOULI OIL—5 dms, Givaudan Corp, Penang
PECTIN—100 dms, T M Duche & Sons, Copenhagen
PEPPER, BLACK—160 bgs, Mutual Spice Co, Cochin
400 bgs, Atlanta Textile Corp, Cochin
160 bgs, East India Trading Co, Cochin
800 bgs, A G Dunn, Cochin
160 bgs, M J Golombeck, Colombo
80 bgs, Daarnhower & Co, Colombo
160 bgs, East India Trading Co, Colombo
80 bgs, Mutual Spice Co, Colombo
160 bgs, Mincing Trading Corp, Alleppey
140 bgs, East India Trading Co, Rotterdam
240 bgs, Otto Gerdau, Cochin
2,376 bgs, Alleppey
960 bgs, Cochin
350 bgs, Singapore
160 bgs, Colombo
PEPPER, RED—68 bgs, California Commodities Corp, Kobe
100 bgs, Louis Furth, Kobe
250 bgs, Mitsubishi International Corp, Kobe
200 bgs, M J Golombeck, Yokohama
200 bgs, Ludwig Mueller, Iskenderun
400 bgs, M J Golombeck, Iskenderun
160 bgs, Port Sudan
PEPPER, WHITE—140 bgs, Ludwig Mueller, Singapore
PEPPERMINT LEAVES—105 bbls, S B Penick & Co, Hamburg
PETITGRAIN OIL—12 dms, Fritzsche Bros, Asuncion
23 dms, Ascuncion
POLYVINYL ALCOHOL—400 bgs, Marubeni Iida Co, Kobe
POLYVINYL CHLORIDE—309 cs, Robeco Chemicals, Yokohama
31 cs, Robeco Chemicals, Kobe
POLYVINYL METHYL ESTER—5 dms, M W Hardy, & Co, Kobe
POPPY SEED—250 bls, Levy & Levis Co, Rotterdam
200 bgs, Rotterdam
POPPYSEED OIL—13 dms, Welch Holme & Clark Co, Antwerp
POTASSIUM GUAIACOL SULFONATE—5 cks, Havre
POTATO STARCH—480 bgs, Stein Hall & Co, Rotterdam
PSYLLIUM SEED—130 bgs, Meer Corp, Bombay
PSYLLIUM SEED, HUSKS—250 bgs, Prentiss Drug & Chemical Co, Bombay
PYRETHRUM EXTRACT—46 dms, McLaughlin Gormley King Co, Matadi
50 dms, Marine Trust Co, Matadi
PYRIDINE—20 dms, Van Oppen & Co, Avonmouth
QUASSIA CHIPS—190 bgs, Kingston
QUEBRACHO EXTRACT—5,100 bgs, American Tanners Ltd, Buenos Aires
2,109 bgs, Tac Tannins & Chemicals Inc, Buenos Aires
1,075 bgs, Barkey Importing Co, Buenos Aires
1,009 bgs, Olson Importing Co, Buenos Aires
257 bgs, Tanimex Corp, Buenos Aires
QUINIDINE SULFATE—30 cs, Lo Curto & Funk, Hamburg
QUININE SULFATE—30 dms, Lo Curto & Funk, Hamburg
5 dms, Chas L Huisking & Co, Hamburg
RADIUM ELEMENT—2 cs, Radium Chemical Co, Antwerp
RAFAELITE—136 kgs, C A Redden, Liverpool
RHUBARB ROOT—70 bgs, Kobe
d-RIBONOLACTONE—15 dms, Hoffmann-La Roche Inc, Bremen
RICE EXTRACTION MEAL—334 bgs, Rohner Gehrig, Trieste
RICE STARCH—200 bgs, American Key Products, Trieste
RUTILE SAND—1,800 bgs, International Titanium Corp, Brisbane
RUTIN—10 dms, Melbourne
RYANIA—1,000 bdls, Port of Spam
SAGE OIL—3 dms, L A Champon & Co, Barcelona
SANDALWOOD OIL—9 cs, International Flavors & Fragrances Inc, Cochin
7 cs, National City Bank, Cochin
SANTAL OIL—1 dm, Mane & Fils, Port Au Prince
SARSAPARILLA ROOT—32 bls, F D Keller & Son, Tampico
SEEDLAC—200 bgs, Haeuser Shellac Co, Calcutta
250 bgs, H C Smith, Calcutta
SENNA—72 bls, Meer Corp, Port Sudan
40 bls, Irving Trust Co, Port Sudan
SESAME SEED, HULLED—300 bgs, Levy & Levis Co, Beirut
SHELLAC—440 bgs, Mantrose Corp, Bremen
100 bgs, F H Paul & Stein Bros, Rotterdam
200 bgs, H C Smith, Calcutta
350 bgs, Haeusser Shellac Co, Calcutta
SHELLAC WAX—20 bgs, Mantrose Corp, Bremen
SIENNA—10 bgs, Leghorn
SILICON CARBIDE—50 bgs, F D Davis Co, Hamburg
SOD OIL—110 dms, Arista Oil Products Corp, Liverpool
SODIUM BICARBONATE—800 bgs, Chemical Manufacturing Co, Liverpool
SODIUM CHLORITE — 200 dms, Independent Chemical Corp, Hamburg
SODIUM PERBORATE—220 bgs, Hudson Shipping Co, Marseille
SQUILL—100 bgs, Meer Corp, Palermo
STARCH—200 bgs, Morningstar Paisley Inc, Rotterdam
SULFAGUANIDINE—32 dms, Alkar Trading Co, Rotterdam
SULFAMIC ACID—300 bgs, Caldwell & Co, Saint Nazaire
SULFASOMIDINE—9 dms, Byron Chemical Co, Yokohama
1 dm, American Roland Corp, Kobe
SULFUR, CRUDE—3,623 tons, E I Dupont De Nemours & Co, Coatzacoalcos
SULFUR, PRECIPITATED—25 bgs, J M Rodgers, Liverpool
TALC—1,100 bgs, C B Chrystal Co, Bordeaux
1,250 bgs, L A Salomon & Bro, Bordeaux
400 bgs, Whittaker Clark & Daniels, Bordeaux
TANKAGE—420 bgs, Tupman Thurlow, Buenos Aires
TAPIOCA FLOUR—1,400 bgs, Manhattan Adhesives Corp, Keelung
THALLIUM SULFATE—2 cs, Bremen
THYME LEAVES—60 bgs, Hismoco American Co, Marseille
THYROID POWDER—13 dms, Lo Curto & Funk, Copenhagen
TRAGACANTH GUM—464 bgs, Am-Iran Corp, Khorramshahr
120 bgs, Khorramshahr
TRICHLOROETHYLENE—499 dms, Chemical Manufacturing Co, Liverpool
TURMERIC—640 bgs, Kellys America Ltd, Alleppey
112 bgs, S B Penick & Co, Port Au Prince
80 bgs, S B Penick & Co, Cochin
640 bgs, A G Dunn, Cochin
163 bgs, Port Au Prince
400 bgs, Alleppey
240 bgs, Cochin
ULTRAMARINE BLUE—121 bgs, Whittaker Clark & Daniels, Hull
ULTRAMARINE ROSE—60 bgs, Whittaker Clark & Daniels, Liverpool
UREA—400 bgs, Baird Chemical Industries, Yokohama
1,000 bgs, Nylos Trading Co, Genoa
100 bgs, Rotterdam
UREA, SYNTHETIC—1,994 bgs, Chemical Manufacturing Co, Liverpool
VANILLA BEANS—10 cs, Gillespie & Co, Cristobal
20 cs, Thurston & Braidich, Cristobal
20 cs, French American Banking Corp, Cristobal
VETIVER OIL—4 dms, Kane Import Corp, Singapore
WATTLE EXTRACT—1,650 bgs, Olson Importing Corp, Beira
ZINC OXIDE—1,103 bgs, Smith Chemical & Color Co, Havre
200 bgs, D Young, Newcastle

—Continued on page 60



CARBIDE'S NEW HOME: This fifty-two-story skyscraper, latest on the New York scene, is becoming headquarters for Union Carbide Corporation. About 700 employees are now occupying the building and others will move in steadily. The company expects to occupy the new structure completely by fall, marking a consolidation of office personnel who are now scattered in fourteen different locations in the city.

FDA Approves Tolerance For a Carbamate Pesticide

Tolerances not exceeding ten parts per million for residues of the pesticide chemical 1-naphthyl N-methylcarbamate in or on bananas, cucumbers, and summer squash have been approved under the Miller pesticide law by the Food & Drug Administration.

The tolerances were proposed in two petitions filed with the agency by Union Carbide Chemicals Company, New York.

Onyx Oil in Merger

Onyx Oil & Chemical Company, Jersey City, N. J., has been merged with Onyx Chemical Corporation. The name of the new company will be Onyx Chemical Corporation.

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Obituaries

Francis J. Curtis

Francis J. Curtis, vice-president in charge of personnel for Monsanto Chemical Company, St. Louis, Mo., died April 21 in that city. He would have been sixty-six years old the day following.

Active in the chemical industry for more than forty-four years, Mr. Curtis spent his entire career with Monsanto and one of its predecessor firms, Merrimac Chemical Company, Boston.

He joined Merrimac in 1915. In 1930, a year after it was acquired by Monsanto, he was named its director of development. He transferred to the parent company's headquarters in 1935 and soon started the company's present system for procurement of technical personnel.

From 1939 until 1943, Mr. Curtis served as Monsanto's director of development. In the latter year he was elected a vice-president and named secretary of the executive and finance committees.

George Calingaert, retired professor of chemistry at Hobart and William Smith Colleges, Geneva, N. Y., and an authority on organo-metallic compounds, died April 16 in Naples, Italy. He was sixty-three years old.

William J. Henrick, sales manager of Tropical Paint Company, Cleveland, Ohio, died April 17 in that city. He was seventy-three years old.

Beardsley Ruml, tax expert whose many activities included a directorship of Enterprise Paint Manufacturing Company, died April 18 in Danbury, Conn. He was sixty-five years old.

Frederick W. Wright, economist at the Terre Haute, Ind., plant of Commercial Solvents Corporation, died April 17 in that city. He was sixty-nine years old.

Merck Scientist Lashes At Estes' 'Irresponsibility'

A leading American scientist and drug research executive last week issued a "vigorous protest against the irresponsible and degrading criticisms" leveled at thousands of dedicated research scientists in industry by witnesses appearing before the Kefauver antimonopoly committee in Washington.

Dr. Max Tishler, president of the Merck Sharp & Dohme Research Laboratories Division of Merck & Co., Newark, N. J., told the New Jersey chapter of the American Institute of Chemists that charges made at the Kefauver hearings "have been demoralizing to those of us who have devoted our lives to research in the pharmaceutical industry."

He declared that drug industry scientists "are honestly looking for new and better ways to treat maladies and not to create markets." He added that their motives "are actuated by the impelling desire to help mankind."

Drug People

—Continued from page 7

whose membership will be announced shortly.

"It is widely stated by some," the PMA head says, "that needed medication is not available to all because of financial difficulties. If this is true, it is time somebody lays out in the open the specific facts. Then, and only then, can specific remedies be discussed intelligently. If it is not true, the reasons for the confusion should be revealed.

"For the first time," he adds, "the efforts of all interested parties—manufacturers, members of the health team, public authorities and patients themselves—will be united to study drug therapy and the results of their efforts will be disclosed for public examination."

Dr. Smith notes that the PMA is just two years old. "We are now organized and staffed to broaden fulfillment of our responsibilities to both the public and the pharmaceutical industry," he goes on. "The study now under way is only part of a broad program that the PMA board of directors adopted some time ago as part of its public service activities."

Phosphoric Unit Aims

—Continued from page 5

the acid which will be moved to a broad group of applications.

On-stream time, observers note, will just about coincide with the opening of an Allied Chemical Corporation facility now abuilding at East Saint Louis, Ill (OPD, 4/18/60). The Allied facility is slated to produce 50,000 tons of phosphoric annually.

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Essential Oils, Aromatics

There was considerable pricing activity among the essential oils and aromatic chemicals—with four advances and five declines. Among the advances were domestic dillweed which advanced 50 cents per pound; grapefruit, 50 cents per pound; sandalwood, 75 cents per pound and Bourbon vetiver, 75 cents per pound. Declines were noted in citral (CP) which came down 15 cents per pound; Messina lemon, 50 cents per pound; both East and West Indian nutmeg, 50 cents per pound and clary sage, $2.50 per pound.

Further weakening is anticipated in Florida orange oil whose 5 cent per pound decline was noted in the previous issue. This is a bit surprising, since the oil is already near an 8-year-low.

Strength is noted in anisic aldehyde, geraniol extra, and patchouli.

Price Trends

Advanced

Dillweed, domestic, 50c. per lb.
Grapefruit, 50c. per lb.
Sandalwood, 75c. per lb.
Vetiver, Bourbon, 75c. per lb.

Reduced

Citral, CP, 15c. per lb.
Lemon, Messina, 50c. per lb.
Nutmeg, USP, East Indian, 50c. per lb.
West Indian, 50c. per lb.
Sage, Clary, $2.50 per lb.

Comparative Price Indexes

(100—1949 average)

Last week	Prev. week	Last month	April 24, 1959
146.72	146.91	146.89	146.76

For Current Prices See Page 11

Essential Oils

Bois de Rose—News from the essential oil dealers is that Peruvian material is weakening. The price came down last week 5c. per pound—from $1.95 per pound to $1.90 per pound.

Costus—This oil has remained fairly steady for some months at $6 per ounce.

An interesting report has been published recently in one of the outstanding English trade journals for perfumery and essential oils, which we are delighted to present here, in part. It is a contribution by the National Chemical Laboratory in Poona, India, prepared by Messrs. A. Paul, A. S. Bawdekar, R. S. Joshi, G. H. Kulkarni, A. Somasekar Rao, G. R. Kelkar and S. C. Bhattacharyya.

The costus plant belongs to the compositae family and grows principally in Kashmir and the upper regions of the Kulu Valley of the Punjab at an altitude of approximately 10,000 feet.

In India, it is known under several names including Kut, Kashmirja and Kushta. And it has the reputation for its medicinal properties, having been used in the indigenous system of medicine.

The roots have been known to contain a fragrant principle and used to be exported to China and Japan in large quantities for burning as incense in Buddhist temples.

The essential oil contained in the roots has attracted the attention of perfumers in India and abroad. Consequently, the oil has found wide use as an ingredient in high grade perfumery.

Several methods have been used for the isolation of the oil. Direct steam distillation of the roots and steam distillation, as well as vacuum distillation of the resinoid have been used by many workers.

The oil has been known to be rich in lactonic constituents, which are not so volatile in steam. Some of these are thermolabile and polymerize easily on protracted heating around 60-70 degrees or more quickly at higher temperatures. For these reasons a solvent extraction procedure using alcohol, benzene, petroleum ether, ether, etc., has also been employed.

Dillweed—Domestic material is firming, according to reports from the essential oil dealers. From its previous low, $3 per pound, it has advanced 50c. per pound to $3.50.

Grapefruit—Still a firm market, grapefruit oil saw a price rise last week. Its previous low was $2.50 per pound whereas now the low is $3 per pound. Demand is still reported to be good whereas supply is about normal—perhaps a bit below normal.

Lime—Oil prices are as follows:

Distilled Mexican, $6.25 per pound; West Indian, $5.90 per pound, and expressed West Indian, $7.75 per pound.

According to historical records, the lime tree was known in a semi-wild state on the Atlantic coast before it was planted near Acapulco on the Pacific coast around 1870.

At one time, Mexican lime oil was considered of inferior quality to material that was produced in the West Indies. But in 1939 a large concern, operating in Colima and Acapulco, built a modern plant and updated its extraction process.

Since that time, Mexican lime quality has risen.

In Mexico, the season is greatly influenced by rain and also by irrigation. On irrigated crops, the trees bear throughout the year, but they do not have definite peaks during the rainy season.

In a normal year, the rainy season will last from June to October, on the west coast. Colima's principal fruit period is in July and August whereas Acapulco has two fruiting periods—the first in May and the second in September and October. These also vary with the rains.

The principal fruiting time in Tamaulipas and Vera Cruz is usually in January.

Lemon — Weakening of the domestic lemon market has had its affect on the foreign market. Material from Messina has come down from its previous high, $3.75 per pound, to $3.25 per pound.

Nutmeg — Essential oil dealers report that there is some material from both the East and the West Indies available on spot for $9 per pound. Previously, the lowest price for these was $9.50 per pound.

Orange—Most dealers in and around New York are agreed that the price for Florida orange oil is 45c. per pound. A few of them don't even think that is the lowest the oil will go. One dealer speculated that it would decline a few more pennies before it hit bottom.

According to the OPD 1960 Hi-Lo Chemical Price Issue, Florida orange oil was as low as 40c. per pound in 1956.

An item of extreme fluctuation, it was as high as $2 per pound just two years later, 1958. Last year's high was $1.25 per pound and last year's low, 45c. per pound.

During 1952 (the first year the Hi-Lo records) the price fluctuated between 90c. per pound and $2 per pound.

Sage—The clary variety is reported to be weakening. From its previous low, $20 per pound, it is now selling for $17.50 per pound. Dalmation and Spanish varieties remain at their previous quotations, $2.85 per pound and $1.25 per pound, respectively.

Sandalwood—This item which has been rising in price for some weeks now, is up to $18.25 per pound whereas its previous low had been $17.50 per pound.

Spearmint—Rumors that the market was weakening a few weeks ago, have not had any apparent effect on the price The low of the range continues at $9 per pound.

Tangerine—The market is reported to be remaining firm. The low of the OPD range continues at $3.75 per pound.

Vetiver—Bourbon material has advanced in price. From its previous low, $16.50 per pound, it has risen to $17.25 per pound with many dealers reporting that they have absolutely no material.

Aromatic Chemicals

Citral—From its previous high, $3.75 per pound, the CP grade has been reduced to $3.60 per pound.

Citronellol—A prime producer continues to report that he has substantial quantities of material available for $1.90 per pound.

Seeds and Spices

Cassia—It is reported that it is becoming increasingly more difficult to buy at source. For this reason, local dealers are said to be trying to elevate spot prices. Little material has been shipped from source for several months, say the seeds and spice dealers. Arrivals during the next few months are expected to be small, they report.

Ginger—Dealers report that the shipping season for Indian material is about over; therefore, it is unlikely that much additional material will be available on spot.

Other grades are rather depressed, the dealers say, because the heaviest ship-

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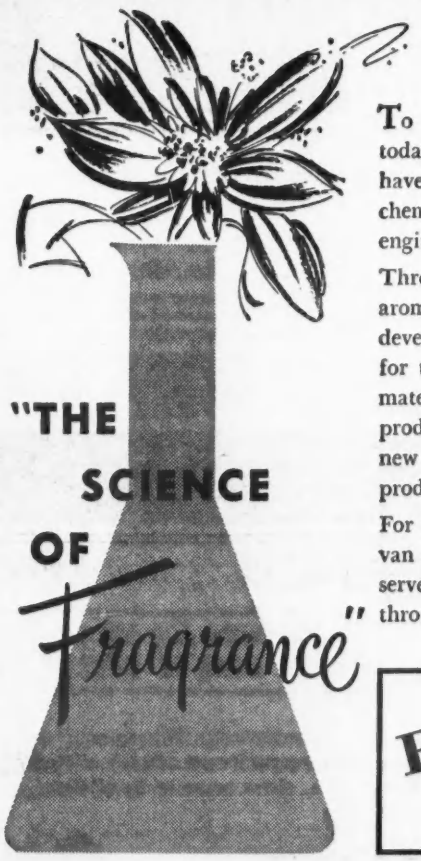

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ments of material from Nigeria and Jamaica are on spot at the present time.

Nutmeg—Stocks are reported to be moving moderately well. Dealers say that imports are slowing up and that there is not too much material accumulated on spot. The same conditions, of course, hold for mace.

Pepper—Both black and white material came down in price a bit, according to reports from the pepper dealers. Malabar black was reduced from 61c. per pound to 59c. per pound; Lampong black was reduced from 61c. per pound to 60c. per pound, and Muntok white was reduced from 90c. per pound to 88c. per pound.

The reasons for the slight weakening was attributed to the fact that demand was not persistent.

In spite of the fact that spot prices are weakening, dealers say that source markets are maintaining their strength.

It seems that the Sarawak government has announced a financing plan intended to remove pressure from their market during the period of peak harvesting.

Under this plan, the government says it will lend up to 75 percent of the market value on black and white pepper at reasonable interest rates.

These loans will be for 90 days and will be so set up that they can be renewed for 90 additional days.

According to one of the pepper dealers, this plan probably will help to maintain prices during the period when the crop moves in volume.

Turmeric—Dealers report that the season for material from Alleppey is nearing its end. Madras material is still being offered at reasonable prices for April and May shipment and Formosan material is in only limited supply. Material from Haiti is expected on spot soon, it was said.

Vanilla Beans—At the Flavoring Extract Manufacturers' Association's 51st annual convention to be held May 1-4 at Hershey, Pa., the following vanilla-related subjects will be discussed:

Progress done on the vanilla research program, the status of the paper chromatography method developed by the association to detect spurious beans, new techniques for vanilla analysis, and when the Food and Drug Administration will define and set standards of identity for vanilla extract and other extracts and flavors.

Polypropylene Scores

—*Continued from page 4*

certain specifications, set out in the FDA order, when tested by the analytical methods described in the order.

The government's approval, says Hercules, will permit packagers to utilize the material in packaging films, rigid containers, closures, coatings, liners and dispensers used in food handling.

In many instances the approval will make possible significant improvements in food packaging, and is expected to broaden widely the use of packaged foods, says Hercules.

The new packaging material, which is described as crystalline polypropylene, is "Pro-fax 6520" (for film) and "Pro-fax 6513" (for injection molding and general-purpose extrusion). These are special food packaging grades of polypropylene produced exclusively by Hercules.

The petition submitted by Hercules in winning acceptance for its new plastic is reportedly looked upon by the industry as a model, and is expected to serve as a guide to other material producers seeking approval for their products.

Experts in the packaging field have predicted a big potential for "Pro-fax" polypropylene as a superior, low-cost container and barrier material since its initial introduction as a commercial plastic a little over two years ago. "Pro-fax" films combine exceptional strength with excellent clarity, resistance to heat, chemicals, and moisture. They are adaptable to hot filling, are heat sealable, highly resistant to fatty foods, and can be safely sterilized at temperatures up to 275 degrees Fahrenheit.

Both in film and injection-molded form, "Pro-fax" is already widely used in a variety of nonfood applications.

Synthetic Rubber Facility

—*Continued from page 7*

them in conjunction with Algemene Kunstzijde Unie N.V., of Arnhem.

Ciago was formed in 1958 and a year later production was started. The plant makes butadiene-styrene type latex and high-styrene reinforcing polymer.

Goodrich Chemical has similar synthetic rubber plants under joint ownership in Japan and England.

PLANT CHIEF: Arnold A. Arndt, appointed manager of plant operations at Pensacola, Fla., by Newport Industries Company, a division of Heyden Newport Chemical Corporation, New York.

Imports at US Ports

—*Continued from page 56*

ZIRCON SAND—2,679 bgs, Lo Curto & Funk, Brisbane
2,400 bgs, International Titanium Corp, Brisbane

Los Angeles

ARABIC GUM—200 bgs, Security National Bank, Port Sudan
ASBESTOS FIBER—1,800 bgs, Johns Manville Corp, Dar es Salaam
COPRA—500 tons, American Trust Co, Cebu
2,240 bgs, Manila
FISHMEAL—28,244 bgs, Chimbote
GINGER—127 bgs, Lagos
HOOF & HORNMEAL—500 bgs, Tupman Thurlow, Rio Grande
KELP—651 bgs, Kelco Co, Capetown
2,070 bgs, First National San Diego, Dar es Salaam
MAGNESITE—800 bgs, Smith Chemical & Color Co, Rotterdam
SESAME SEED—350 bgs, B C Ireland, Corinto
250 bgs, Hismoco American Co, Corinto

Philadelphia

ANTIMONY REGULUS—90 cks, Rijeka
ASBESTOS FIBER—2,160 bgs, Chas Kurz & Co, Lourenco Marques
BONE—1,525 bgs, Kind & Knox, Buenos Aires
337 tons, Buenos Aires
CASEIN—200 bgs, National Casein Co, Rotterdam
CHESTNUT EXTRACT—157 bgs, Barkey Importing Co, Naples
CORN STARCH—600 bgs, Impex Agricultural Corp, Rijeka
672 bgs, Rotterdam
CRESYLIC ACID—150 dms, Concord Chemical Co, Rotterdam
GLUE—400 bgs, First National Boston, Hamburg
GYPSUM CRUDE—10,973 tons, National Gypsum Co, Halifax
6,274 tons, U S Gypsum Co, Hantsport
HEXANOL—30 dms, Hamburg
MAGNESITE—2,334 tons, Split
MOLASSES—1,757,053 gals, S Western Sugar & Molasses Co, San Pedro
1,557,282 gals, Rio Haina
NAPHTHALENE—1,000 bgs, Allied Chemical Corp, London
OLIVE OIL—55 dms, Chase Manhattan Bank, Seville
50 dms, Phila National Bank, Seville
POTASSIUM CYANIDE—400 dms, Ugine Industries, Havre
PYRIDINE—138 dms, Marine Midland Trust Co, Rotterdam
QUEBRACHO EXTRACT—2,177 bgs, Tan American Corp, Buenos Aires
SODIUM CASEINATE—80 bgs, Stein Bros, Drammen
TALC—1,100 bgs, Whittaker Clark & Daniels, Bordeaux
TAPIOCA FLOUR—750 bgs, Geismar & Co, Kohsichang
TRICHLOROETHYLENE—198 dms, Gothenburg
UREA—1,000 bgs, Nylos Trading Co, Genoa
VANILLA BEANS—70 cs, Zink & Trieste, Tampico
WATTLE EXTRACT—400 bgs, Barkey Importing Co, Mombasa

San Francisco

ANIMAL CHARCOAL—960 bgs, Glasgow
ARABIC GUM—25 bgs, Bank of N Y, Port Sudan
ASBESTOS FIBER—4,540 bgs, Keasby & Mattison, Lourenco Marques
2,200 bgs, Johns Manville Corp, Capetown
800 bgs, Lourenco Marques
BLOOD, DRIED—1,000 bgs, Myers Sales Co, Copenhagen
CALCIUM NITRATE—16,000 bgs, Atkins Kroll & Co, Antwerp
CASEIN—100 bgs, J R Spellacy, Buenos Aires
CASSIA—200 bls, R J Spitz, Singapore
CLOVES—96 bgs, Zanzibar
COPRA—750 tons, Cargill Inc, Manila
1,000 tons, Cargill Inc, Dumaguete
2,000 tons, Tacloban
1,400 tons, Cebu
1,800 tons, Dumaguete
1,500 tons, Ozamis
CUMIN SEED—100 bgs, Wm E Martin & Sons, Hong Kong
FISHMEAL—900 tons, Chimbote
GYPSUM, CRUDE—10,125 tons, Kaiser Gypsum Co, San Marcos
INFUSORIAL DIATOMACEOUS EARTH—662 bgs, Continental Grain Co, Hamburg
MOLASSES—689 tons, S Western Sugar & Molasses Co, Iloilo
MONOSODIUM GLUTAMATE—50 cs, Ajinomoto Co, Yokohama
NUTMEG—35 bgs, Bank of California, Singapore
PAPAIN—80 cs, Wm E Martin & Sons, Matadi
POLYVINYL ALCOHOL—200 bgs, Marubeni Iida Co, Kobe
SESAME SEED—800 bgs, B C Ireland, Corinto
200 bgs, Lastreto Phillips, San Juan del Sur
SODIUM CYANIDE—300 dms, C M C Chemicals, Manchester
SODIUM SILICOFLUORIDE—100 bgs, D M Hicks, Amsterdam
TAPIOCA FLOUR—200 bgs, Stein Hall & Co, Santos
2,410 bgs, Stein Hall & Co, Bangkok
1,788 bgs, Morningstar Paisley Inc, Bangkok
6,390 bgs, H M Newhall & Co, Bangkok
UREA—1,250 bgs, Atkins Kroll & Co, Antwerp
ZINC CYANIDE—35 dms, C M C Chemicals, Manchester

Coatings Materials

"Caution: Wet Paint" is rapidly becoming the watchword of many consumers throughout the nation as the warmer weather turns many customers minds to visions of brightly colored homes, fences and walls. For some April may be the cruelest month but paint men are not of this breed. Carried forward by the revival in painting activities, over-all demand for paint materials has begun to hit its usual Spring-fever pitch. Trade sources report that demand for prime pigments is well above that reported last week. Not enjoying this spurt in demand are the metal pigments. Zinc oxide and the lead pigments are only routine in sales volume but prices are unchanged. The market conditions for aluminum paste and powder reflects the situation for the other metal pigments: Steady but routine.

Casein men are watching closely the progress of the bill now on the floor of the house that would continue the suspension of the duty on casein for an additional three years. The trade remains optimistic about its outcome but consumers would seem to be waiting with more caution. Very little future interest was shown last week for Argentine casein. Prices are unchanged for previous quotations. The same situation holds throughout the casein market. There is a report that a few offers of Australian casein were made but usually well informed sources maintain that the quality is not up to standard expected for this material. Trade men continued to talk about the possibility of French casein making an appearance on the market here. There is some conflict in opinion as to the price of the French material. According to one source, the French have not decided on a price. Others contend that the price is about the same as that of the Argentine material. In either case, the amount of the French case reported to have been offered is not great enough to be taken seriously.

Lacquer materials are reported to be well situated in regard to its supply position. The only exception is in regard to the phthalate plasticizers. Some tightness continues to exist and producers are hopeful that supplies will be more fully available during the next month. Prices are said to be firm at the old listings.

The shellac market continued to be steady in demand last week. Material, both raw and processed, is said to be moving well. The Calcutta market held at the same levels as in previous weeks. Conditions there are said to be very quiet with prices firm and unchanged.

Price Trends

Advanced
None

Reduced
None

Comparative Price Indexes
(100=1949 average)

Last week	Prev. week	Last month	April 24, 1959
103.14	103.13	103.03	103.05

For Current Prices See Page 11

Prime Pigments

Aluminum Paste and Powder—Very little change is noted this week in general market conditions for the aluminum pigments. In general metal demand has not been up to par in recent weeks. Producers of the paste and powder are optimistic concerning the use of their material as a roof coating. Consumer interest is growing, and with the season for much of the outdoor painting beginning, trade men are anticipating an excellent quarter for their product.

Dry Colors—The demad for dry colors is reported to be breaking through the routine conditions that has been a feature of the market for over a month. The warmer weather, in many parts of the country, brings with it the usual revival of painting activities. Sales are reported at good volume and prices are unchanged.

Lead Pigments—Like most the metal pigments, demand for the lead pigments is slow but steady. Supplies are well situated and prices are unchanged.

Zinc Oxide—Since the last price change, of last October 2, there has been little activity in the zinc oxide market. Demand is at routine levels. As pointed out by a leading producer, the demand for zinc oxide comes principally from the rubber industry. Uses in the paint trade has declined from a high of 104,000 1950 to 60,000 tons last year. By 1965 comsumption by the paint trade should be around 65,000 tons.

Lacquer Materials

Cellulose Acetate/Butyrate—This long-standing unchanged item continues at its routine pace. Demand for the material is said to be fairly well sustained, and prices hold in the same range as in previous months.

Nitrocellulose—Market conditions hold at about the same levels as reported last week. Sales are at good volumes; prices are said to be firm and supplies are adequate for all areas.

Plasticizers—Supplies of the plasticizers are still reported to be tight. Some loosening is apparent but producers say that they are just about meeting present demand. By next month the balance between the supply and demand for the phthalate plasticizers should be restored. If supplies have not been sufficiently increased by then, producers will count on the decline in demand that usually comes with the summer months to affect the proper balance. For the present, prices are reported to be firm at the old listings.

Fillers and Inerts

Asbestos—Shipments of asbestos for the first two months of the year are reported to be running ahead of last year's volume by about 6 percent. Some trade sources are of the opinion that shipments should run about 10 percent above the total reported for 1959. The outlook seems to be for some leveling off after a fairly active first quarter. Prices remain at the same levels as in previous months with supplies reported to be adequate.

Natural Resins

Gums—Market conditions for the gums are about the same as last week. Prices are unchanged and demand is reported to be steady. Congo copal holds in the 25c. to 24c. a pound range for No. 1, and No. 2 remains 22c. to 24c. a pound. Singapore and Philippine pale chips prices are unchanged.

Shellac—The Calcutta market is very quiet this week. Demand continues to well sustained with prices firm at the same listings for both orange and bleached shellac.

Miscellaneous

Casein—Very little future interest was shown last week in Argentine casein. Some firming in prices was reported but prices held at the same range as quoted last week. Sources are of the opinion that the usual end of the month situation prevails in regard to the supply situation of casein. Consumers are said to be working off stocks, preferring to wait out the situation concerning the duty-bill on casein now on the floor of the house awaiting action by that body. As reported in this space last week, the present three month suspension has been in effect since the first of the month and two weeks ago, the senate finance committee sent to the house a bill which if approved would extend the suspension of the duty on industrial casein until July of 1963. As of presstime no further word was received on the status of the bill.

Offers of French casein were reported on the market last week. More in the nature of feelers, the amount offered is said to have been in the neighborhood of about 25 tons. According to one source the price is in the range now quoted for Argentine material. But on the other side of the fence one informed source reported that the French have not decided on the price of their material. The quality of the French casein has yet to be demonstrated to the satisfaction of interests in this country. The question of price and quality of the French casein remains the big factors in its acceptance here.

The news from other sources of imported casein is of a routine nature. Prices for Polish, New Zealand and Australian casein are unchanged. A few offers of Australian

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Coatings Materials

casein were made but were reported to have been of a secondary quality. Supplies of European casein is said to be somewhat tight. In line with that report, it has been noted that the Dutch casein producers are reported to have converted to the production of milk powder.

Glues—The Bureau of Census reports that during 1958, shipments of glues and gelatin amounted to $194 million, an increase of 29 percent over the total in 1954. The value of shipments for glues and adhesives was estimated at $170,719,000. In 1954, the value of shipments was placed at $136,083,000. Production of hide glue totaled 52,363,000 pounds in 1958. Of this total, 51,721,000 pounds was shiped with a value estimated by the Bureau of Mines at $13,188,000. Output of animal glue, extracted bone, was estimated at 14,687 pounds and shipments of 13,731,000 pounds were valued at $2,092,000. Green bone animal glue production during 1958 was 37,745,000 pounds with 40,416,000 pounds being shipped and valued at $7,375,000. Flexible and nonwarp glue production totaled 37,745,000 pounds, of which 37,342,000 were shipped with a total value of $6,819,000. Production of liquid glue was estimated for 1958 to have been 11,846,000 pounds. Shipments were valued at $2,506,000 and represented a volume of 11,794,000 pounds.

Naval Stores

Gum naval stores production during March was reported at 3,080 barrels of turpentine and 11,710 drums of rosin, according to the Crop Reporting Board. Production for the 1959-60 crop year totaled 107,400 barrels of turpentine and 334,110 drums of rosin, down 10 percent from the previous season. Output of other naval stores during the 1959-60 crop year and the percent change from the 1958-59 season follow: steam distilled turpentine 175,950 barrels, up 2 percent; sulfate turpentine 353,060 barrels, up 12 percent; steam distilled rosin 1,198,690 drums, up 1 percent; and tall oil rosin 382,970 drums, up 26 percent. Gum turpentine stocks on March 31, 1960 were less than on hand a month earlier and below the level of a year earlier, while wood turpentine stocks were slightly higher than on February 29, 1960 and considerably higher than on March 31, 1959. Rosin stocks on March 31, 1960 were less than at the end of February and 78 percent below holdings a year earlier.

Rosin, Gum

(USDA, per 100 lbs.)

	Fri. Apr. 15	Mon. Apr. 18	Tues. Apr. 19	Wed. Apr. 20	Thurs. Apr. 21
Drums—					
K	...	...	...	...	$12.25
M	...	$12.25	...	$12.39‡	12.25
WW	$13.03	12.90	...	...	13.25
Bags—					

Tankcars (for week ended April 22)—
M or better, $11.50

Sales, USDA
4 635* ... 2 557

New York
(Per 100 lbs., c.l., Friday)
K, M, $13.50; N, $13.85; WG, $14; WW, $14.50

Turpentine, Gum

(USDA, per gal., 7.2 lbs.)

Price	.52½	...	.51	...	.70 9/10
Sales	8,000	...	4.000	...	1‡

* Drums equivalent. ‡ Carlots. § Average price.

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Petroleum Derivatives

Despite distress signals audible from several areas of the petroleum industry the last two weeks, market conditions for aromatics and aliphatic solvents remain unchanged. Prices for all products in all regions are the same and no fluctuation is expected in the near future. Benzene supply continues tight as estimated steel production capacity flirted with the 80 percent figure for the second consecutive week. Substantial imports of this aromatic are unforeseen as high prices and demand in European markets pre-empt US calls.

Market estimates for toluene indicate a slow, unrelenting decline in demand for aviation gas. Producers undoubtedly will continue the trend to let toluene run into gasoline. Xylene experienced a brief flurry of activity which diminished with reports of reduced auto output.

In the aliphatic solvents one producer reports a generally favorable picture for VM&P naphtha while the mineral spirits market is expected to gain momentum with the arrival of temperate weather.

With regard to tight benzene supply, the impact of high compact car sales on steel demand, and therefore coke oven output, is of interest. On a unit basis auto production is predicted to outstrip last year's figures. However, the increase will be accounted for by unexpectedly high compact car volume. The significance here is that the compact car uses 1,500 pounds less steel than a standard size auto. The result is that steel consumption will rise, but only half as much as the increase in auto volume.

A cut in allowable Texas oil production for May was ordered last week by the Texas Railroad Commission. Crude output is to be based on eight days' production, a decline of one day from April. The eight day figure is the lowest since the spring of 1958 when the same schedule applied.

Crude output for May was set at 2,574,894 barrels a day by the commission, a decrease of 229,195 barrels from April.

The agency's action was prompted by excessive crude stocks which recently resulted in reductions in price for Texas crude. Independent producers had sought a seven day schedule, but most major companies recommended and approved of the eight day production quota.

Price Trends

Advanced
None

Reduced
None

Comparative Price Indexes
(100—1949 average)

Last week	Prev. week	Last month	April 24, 1959
104.34	104.34	104.34	104.42

For Current Prices See Page 11

Aromatic Solvents

Benzene—Supply is still tight and the reasons for this condition are two-fold—steel and foreign demand. Production of steel last week hovered around 81 percent of capacity, up a scant 2 percent from the previous week. There is no hint of optimism in this increase for it was due in part to resumption of activity at a plant in the Great Lakes region after eight days of strike. Steel customers in general now seem content to work with inventory acquired during the accelerated production following the end of the national strike.

The second reason for tightness in benzene is to be found abroad. European demand for this aromatic is strong and continental producers are being lured by the higher prices to be found in their own area. The result is a slackening of imports to the US.

Toluene—Jet aircraft, using kerosene instead of aviation gas, are predominant in the field of long-range flights. All major airlines are phasing out piston craft by direct sale or lease or relegating the propeller-driven planes to intracontinental flights. Hope is waning too that the medium-range flight field will remain a consumer of aviation gas. Indicative of this is the recent cooperative agreement reached between a major US plane manufacturer and a French aircraft firm which produces a highly successful twin jet passenger plane. The French craft has long been a major feature of the usually shorter European flights. Now it would seem some airlines will attempt to introduce the twin jet plane into their stable for such heavily travelled routes as New York-Washington, New York-Chicago and the like where the use of larger jets would prove uneconomical.

It would appear that the demand for toluene for aviation gas has no where to go but down.

Xylene—Demand rose momentarily due to a spot spurt in auto production immediately preceding Easter. A cutback from the high level of car output may be in the offing, however. At any rate, indications are that the position of xylene is not apt to change. Specifically, it remains highly competitive in the motor city with a price of 27½c. a gallon, delivered. Elsewhere the price range is from 28c. to 30c. f.o.b.

Crude Oil Stocks

Stocks of domestic and foreign crude petroleum at the close of the week ended April 9, totaled 256,173,000 barrels according to data reported by the Bureau of Mines. Compared with the total of 258,227,000 barrels the preceding week, this represents a decrease of 2,054,000 barrels comprising a decrease of 2,785,000 barrels in stocks of domestic crude and an increase of 731,000 barrels in stock of foreign crude.

Aliphatic Solvents

Cleaners Naphtha—Information from the National Institute of Dry Cleaning reveals some interesting trends relevant to demand for cleaning solvents.

Two principal solvents are used—aliphatic naphthas such as cleaners naphtha or Stoddard solvent—and perchloroethylene. Stoddard solvent is favored by establishments with heavy volume, such as chain and institutional dry cleaners. Perchloroethylene is employed by the smaller volume operators, namely, the local shops with dry cleaning apparatus on the premises.

Comparing use in plants it is noted the two chemicals are utilized in about the same number of plants each. Study of volume indicates, however, that Stoddard solvent captures 60 percent of the total.

The dry cleaning industry estimates its yearly business volume at $2 billion and is aggressively aiming at a higher figure. Institutional advertisements are attempting to alert the public to the benefits of regular dry cleaning and also of summer and winter storage with concomitant cleaning.

Dry cleaning is still a seasonal business, but efforts are being made to reduce the customary dips, especially the drop-off during the summer months.

The industry finds that more people are having cotton garments dry cleaned. Additionally, the public is no longer content to wash 'n' wear. They'll wear it but are increasingly satisfied to leave the "washing" to a dry cleaner. The Chinese water torture of clothing dripping on a rack appears to be diminishing. Solvent producers can only wish the industry success in its efforts to increase volume and eliminate seasonal valleys in dry cleaning. Achievement of these aims will boost solvent sales as well as distribute demand more evenly throughout the year.

Hexane—Producers of this solvent are easily keeping pace with the demand from vegetable oil extractors. There is no expectation of anything but routine activity in this field for some time to come. Prices are, for tankcars, New York and New Jersey, 20c. a gallon, and Houston, on the same basis, 16c.

Mineral Spirits—March was 30 percent colder than usual delaying annual spring painting plans until the arrival of more favorable weather. Calls for regular mineral spirits should pick up as outdoor painting increases. Meanwhile, the odorless and regular spirits remain unchanged in price.

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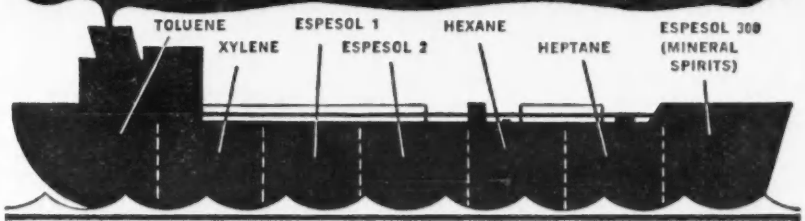

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Oils, Fats and Waxes

Light consuming demand for oils and fats unsettled the market and price declines far outnumbered gains last week. Further weakness developed in crude coconut oil because of continued quiet demand which brought increased offers on a price scale downward, the market registering a net decline of 5/8 cent per pound on Pacific coast and 1 cent New York delivery. Copra was easy and nominal. Lower cost of crude oil was reflected in refined deodorized coconut oil which was reduced 2 cents per pound. Coconut fatty acid also was weaker declining 2¼ cents.

Edible oils were unsettled and lower. Corn and peanut oils were sharply lower, off ½ cent per pound and soybean oil ⅛ cent lower. Cottonseed oil was quiet, but steady. Spanish olive oil continued to advance under active demand from European buyers, principally for Italian account. Shipments were raised another $1 per 100 kilos. Olive oil on spot also was stronger and adanced 10 cents per gallon.

Slackened buying interest for tallow and greases brought increased offers, which made the market a shade easier. Prices were unchanged, except choice white grease which was slightly lower. Export inquiry was reported slow.

Increased trading in No. 1 Brazilian castor oil stiffened the market and prices advanced ¼ cent per pound, following a good volume of business at slightly less. Scarcity of offers from Brazil and stronger Indian oil market were contributing factors in firming the local market. Tung oil remained firm at unchanged quotations, because of light available stocks. Linseed oil moved in better volume against contracts, while new business was still spotty. Prices were steady with higher cost of flaxseed. Oiticica oil was quiet and fairly steady, despite slackened consumer demand. Crude menhaden oil was inactive, but was well held at former levels.

Soybean meal was steady and unchanged, while linseed meal was sharply lower, off $4 per ton. Cottonseed meal also was weak and dropped $1 per ton.

Price Trends

Advanced

Castor oil, No. 1 Braz., ¼c. per lb.

Reduced

Coconut oil, crude, ½c. per lb.
Refd., deod., 2c. per lb.
Coconut oil, fatty acid, 2¼c. per lb.
Copra, $2.50 per ton
Corn oil, crude, ½c. per lb.
Refd., ½c. per lb.
Corn oil fatty acid, 1c. per lb.
Cottonseed oil fatty acid, 1c. per lb.
Cottonseed meal, $1 per ton.
Grease, choice white, ½c. per lb.
Lard, cash, 3 20c. per lb.
Linseed meal, $4 per ton
Peanut oil, crude, ½c. per lb.
Refd., ½c. per lb.
Soybean oil, crude, ½c. per lb.
Refd., ½c. per lb.
Soybean oil fatty acid, 1c. per lb.

Comparative Price Indexes

(100=1949 average)

Last week	Prev. week	Last month	April 24, 1959
113.57	114.22	113.75	115.14

For Current Prices See Page 11

Vegetable Oils

Castor—Improved trading in Brazilian oil for nearby combined with scarcity of oil for shipment from the Argentine stiffened the market and quotations for No. 1 were raised 18c. per pound, following sales at ⅛c. less. Domestic grades moved moderately at unchanged prices.

Imports of castor beans and castor oil at New York and Philadelphia last week were as follows:

	Pounds	
	Castor Beans	Castor Oil
Last week	----	2,990,000
Previous week	97,200	1,584,000
Corresponding week, 1959	1,250,000	2,200,000
Total this year	1,599,300	29,684,000
Corresponding period, 1959	10,340,000	26,910,000

Coconut—Quiet demand combined with freer offers for shipment weakened crude oil. Prices dropped 5/8c. to 1c. Crude was offered at 14½c. per pound, tankcars, f.o.b. Pacific coast for nearby, and sold at 14c. for May-June, same basis. The New York market also was lower. Tankcars dropped to 16½c., New York, prompt delivery.

Coconut oil and copra exports totaled 134,476 tons, oil basis during the first quarter of 1960, an increase of about 50 percent above the same quarter last year, according to the Department of Agriculture. Coconut oil shipments were off 16 percent to 12,049 tons, while copra exports of 194,329 tons were two-thirds higher.

Corn—Market was easier and off ½c. Crude sold at 13c. per pound, tankcars, f.o.b. mills, prompt shipment. Refined declined to 16.73c., tankcars, New York, prompt delivery.

Cottonseed—Futures were unsettled and lower because of liberal liquidation on the New York Produce Exchange last week. Heavy selling pressure on May and July deliveries caused quotations to score the biggest losses while deferred deliveries were only slightly lower. Trade interests and exporters were buyers on the downturns and the market had difficulty in holding rallies. Export business was reported light. The United Arab Republic (Egypt) has been authorized to purchase $2.4 million worth of cottonseed or soybean oil under PL 480. Cash oil market was quiet, but steady. Refined salad was maintained at 13⅛c. per pound, tankcars, New York, prompt delivery.

Offers of crude were limited as stocks were low. Tankcars were quoted at 10c. per pound, Valley; 10⅛c. in the southeast; 9¾c. to 9⅞c., Lubbock and 9⅞c., Waco. Cotton farmers are planting new crop and in some areas are having to replant due to wet weather.

Cottonseed Oil Futures

Sales and prices of prime summer yellow cottonseed oil futures in tankcars (60,000 pounds) on the N. Y. Produce Exchange for the week ended Friday, April 22, follow:

	Sales	High	Low	Close
		Cents per Pound		
May	344	12.07	11.84	11.90S
July	856	12.11	11.90	12.00S
Sept.	93	11.90	11.71	11.83S
Oct.	109	11.76	11.55	11.70S
Dec.	29	11.70	11.51	11.63@11.66
March	12	11.66	11.60	11.67@11.72
May (1961)	13	11.70	11.54	11.67 Bid

Total sales and switches, 1,456 contracts.

Linseed—Steady tone prevailed in oil, reflecting the firmness of flaxseed. Demand was confined to actual needs, while withdrawals against current contracts improved. Raw oil was held at 13c. per pound, tankcars, f.o.b. Minneapolis, April-July delivery; 13.2c., August-September, same basis and 14.11c., f.o.b. New York.

CCC sold 5,797,324 pounds of raw linseed oil of which 3,592,724 were sold at 10.606c. per pound, bulk f.o.b. St. Paul, Minn., and 2,204,600 at 10.511c., Minneapolis, for export last week. This brought total sales to 43,576,324 pounds since February 18. The agency is offering 11,500,000 pounds for sale this week (Wednesday, April 26), also 1,000,000 pounds for unrestricted use on a competitive bid basis.

Oiticica—Deliveries against orders were reported moving in good volume. New business was slow. Tankcars were offered at 14¼c. to 14½c. per pound, New York, prompt delivery, depending upon quantity. Drums were available at 16¼c. to 16¾c., spot, as to quantity.

Olive—Active European demand for shipments from Spain further strengthened the market. Replacements were raised another $1 per 100 kilos. Italy was reported the chief buyer for shipment. Spanish oil for prompt shipment was higher at $56 per 100 kilos, f.o.b. ports and later positions at $57, same basis. Higher cost of oil abroad finally stiffened the local market and spot stocks were lifted 10c. to $2.40 to $2.50 per gallon, drums, duty paid, as to quantity.

Palm—Business was restricted to actual needs. Drums were unchanged at 14c. to 15c. per pound, spot, as to quantity and 11¾c. for tankcars.

Peanut—Crude was easier and down ½c. Tankcars were quoted at 16c. f.o.b. mills nearby and 15¾c. for May. Refined declined to 19¼c., tankcars, New York basis. Buying interest lagged.

An increase of 1,761 acres in allotments for states producing Valencia type peanuts in 1960 was announced last week by the Department of Agriculture. These states include Alabama, Florida, Georgia, New Mexico, South Carolina, Tennessee, and Texas. The increase raises the na-

Oils, Fats and Waxes

tional total for all types of peanuts to 1,611,761 acres.

Soybean—Crude was unsettled and slightly lower. Tankcars were offered at 7⅞c. per pound, Decatur, unrestricted, April-May shipment. Refined salad was lower and offered at 10c., tankcars, New York basis.

The United Arab Republic (Egypt) has been authorized to purchase $2.4 million worth of soybean or cottonseed oil under PL 480. Date of contracts was from April 26 to July 30 and shipments from April 26 to August 31. Poland purchased 1,500 tons of soybean oil last week.

Tung—This market remained firm with prices ranging from 22c. to 22¼c. per pound, tankcars, New York for prompt delivery, according to seller. Domestic oil was unchanged and quoted at 21⅜c. to 21½c., tankcars, f.o.b. mills for prompt shipment. Drums on spot were held at 24c. to 24½c. per pound, depending upon quantity.

Miscellaneous

Cocoa Butter—Trading was confined to actual needs. Prices were unchanged from 56c. to 61c. per pound, spot, as to quantity.

Copra—Prompt shipment was quiet and slightly lower at $197.50 per ton, c.i.f. Pacific coast.

Flaxseed—Trading in this market was most active in many weeks, over 150,000 bushels booked on to-arrive basis in a one-day spurt of buying. Advance of 5c. a bushel was not sustained and No. 1 closed lower at $3.35 a bushel, spot and to-arrive, basis Minneapolis. Crop reporting agencies indicate that moisture conditions in the growing area are adequate to plentiful as field work gets under way.

Flaxseed crushed in March totaled 1,483,654 bushels. Total crush from August through March was 16,189,632 bushels it was reported by The National Flaxseed Association.

Fats and Greases

Greases—Trading was restricted to a light volume. Market tone was not as firm as a week ago. Choice white was slightly lower, with sales ranging from 6⅞c. to 7c. per pound, tankcars, delivered, while yellow was unchanged at 5⅞c. to 6c., same basis, as to acid.

Lard—Market was easy and slightly lower. Cash lard declined to 9.20c. per pound, drums, Chicago.

Tallow—Buying interest slackened and undertone of the market was slightly easier. Offers were freer. Bleachable fancy was unchanged at 6¼c. to 6⅜c. per pound, delivered; guaranteed fancy, 6⅝c.; prime, 6c. to 6⅛c.; special, 6c., nominal and No. 1, 5⅞c. to 6c., same basis. Export interest was slow. Guaranteed fancy in drums was quoted at 7.70c. per pound, f.a.s. and 6.65c., in bulk, f.o.b. New York.

Fatty Acids

Lower cost of coconut oil was reflected in the fatty acid and quotations were reduced 2¼c. per pound. Distilled was lower at 25¾c. per pound, tankcars and stripped at 26¾c. Vegetable acids also were easier because of slow demand and cheaper raw materials. Corn, cottonseed and soybean fatty acids declined 1c. per pound and all of them were reduced to 13¼c. per pound, tankcars. Animal fatty acids were in good demand and unchanged. Tallow acid was maintained 10¾c., per pound, tankcars.

Cake and Meal

Cottonseed Meal—Market was easy, declining $1 per ton. Demand was slow due to improved good pasture conditions. Stocks however, were light. Meal, 41 percent, was quoted at $58 per ton, sacked, f.o.b. Memphis; and $63.50, in Alabama, Georgia and Carolina areas.

Linseed Meal—Trading was quiet and confined to small lots for nearby needs. Shipping directions, too, were slow. Prices declined sharply with sales reported at $55 per ton for nearby delivery. Extracted meal, 34 percent, was quoted at $55 a ton, bulk, in carlots, f.o.b., Minneapolis, for April delivery.

Peanut Meal—Local demand took most of production, which continued small. Meal, 45 percent was quoted at $53 to $54 per ton, sacked, f.o.b. Alabama, Carolina area.

Soybean Meal—Signs of stability became apparent in this market on the heels of recent declines. Omaha market and unrestricted billing displayed best recovery and Iowa buyers became somewhat more active. Southwest and northwest were still depressed. West coast was extremely dull, influenced to large extent by strike shutdown of a large formula feed plant. Meal, 44 percent, was held $56 a ton, unrestricted, bulk, Decatur, for prompt shipment.

Waxes, Vegetable

Consumer interest in replacements was light, chiefly for actual needs. However, while business was slow, carnauba grades remained firm at unchanged quotations, reflecting the strength and high cost of shipments from Brazil. Offers for shipments were limited and firmly held at higher prices. The Brazilian situation was strong because of the recent heavy flood damage at producing areas. No. 3 Ceara

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1—4000 gal. 316 S.S. clad agitated Reactor with coils.
2—Pfaudler 1000 gal. glass lined, jacketed, agitated Reactors.
1—Louisville 6' x 45', 316 S.S. Rotary Steam Tube Dryer.
2—Buflovak 42" x 120", atmospheric double drum Dryers, complete.
1—Sperry 18" x 18" Filter Press, 316 S.S., P & F, 15 chambers.

CENTRIFUGES

2—Baker Perkins 36 HS TerMeer, continuous.
1—Sharples C-27 Super-D-Hydrator, 316 S.S.
1—Bird 18" x 28", 316 S.S. Solid Bowl, Continuous.
1—Bird 36" x 50", 347 S.S. Solid Bowl, Continuous.
2—Sharples PY14, PN14, Super-D-Canters, 316 S.S.
1—Tolhurst 32" Suspended, 316 S.S., imperforate basket.
2—AT&M 48" Suspended, 316 S.S. basket.
2—Sharples #16, 304 S.S., 3 Hp motor.

REACTORS — EVAPS — CONDS — TANKS

1—Condenser Service 650 gal. 304 S.S. closed Kettle, 5' x 4', with 100 sq. ft. bayonet heater.
1—1400 gal. Blaw-Knox, steel, jacketed, agitated Reactor.
1—2000 gal. Struthers Wells 316 S.S., jacketed, agtd. Reactor.
2—3200 gal. 316 & 347 S.S., jacketed, agitated Kettles.
1—550 sq. ft. Buflovak monel single effect Evaporator.
1—7500 gal. 316 S.S. Vert. Storage Tank, 7' x 25', 50 psi.
1—750 gal. nickel clad Mixing Tank, 125# nickel coils.
1—4000 gal. Haveg Vert. Tank 8' x 12'.
1—1500 gal. Stainless Pressure Tank, 5' x 10', 90#.
1—12,000 gal. horiz. steel Pressure Tank, 7'6" x 36', 200 psi.
6—Stainless Heat Exchangers: 1220, 786, 536, 370, 315, 250 sq. ft.
1—24" dia. x 35', 304 S.S. Bubble Cap Column.

FILTERS

1—Oliver 6' dia. Horizontal Filter, 216 S.S.
1—Oliver 3' x 6' Steel Rotary Vacuum Precoat Filter.
1—Oliver 5'3" x 6' Rotary Vacuum Precoat Filter, 316 S.S.
1—Niagara #370-38 Filter, 370 sq. ft., 304 S.S.
2—#49 Valles Rotating Pressure Filters, 738 sq. ft.
1—Oliver 5'3" x 8' Steel Rotary Vacuum, vaportite housing.
1—Feinc 5' x 6' Stainless Steel Rotary Vacuum Filter.
2—#10 Sweetland Filters, 27 leaves, 4" centers, 250 sq. ft.

DRYERS

1—Buflovak Vacuum Shelf with 20—60" x 80" shelves.
1—Devine Vacuum Shelf with 19—59" x 78" shelves.
1—Devine Vacuum Shelf with 10—40" x 43" shelves.
2—Devine 4' x 9', single drum, atmospheric.
1—Buflovak 3' x 10' Rotary Vacuum Dryer.
1—Baker Perkins 5'6" x 6' Rotary Vacuum Dryer.
2—Louisville Rotary Steam Tube 6' x 25', 6' x 50'.
9—Rotary Dryers, 34" x 30', 4' x 40', 6' x 50', 6' x 60', 7' x 80', 8' x 87'.
2—Louisville 8' x 50' Stainless steel lined Rotary Dryers.
1—Traylor 30" x 18' Stainless steel Rotary Dryer.
2—Link Belt, 7'5" x 25", 6'4" x 24', S.S. Louvre Dryers.

MIXERS

1—Baker Perkins 100 gal., jacketed, double arm, 30 HP.
1—Baker Perkins #16TRM, 150 gal. jktd., Vac. 60 HP.
1—Baker Perkins 50 gal. jacketed, double arm.
5—Day "Cincinnatus" double arm, 250 and 100 gal.
2—Steel jacketed Powder Mixers, 225 and 350 cu. ft.
1—3' dia. Simpson Intensive Mixer.

MISCELLANEOUS

1—#3TH Mikro Pulverizer, 15 HP.
1—Raymond 10' dia. Single Whizzer Separator.
1—#5 Mikro Atomizer with motor and cyclone.
2—Bantam Mikro Pulverizers, S.S.
1—Ross 6" x 14" Three Roll Mill.
3—Swenson Walker Continuous Crystallizers, 24" x 30' sections.
2—Robinson Sifters, 40" x 84", Stainless.
1—#24 Rotex Sifter, 20" x 64", Quadruple deck.
8—Stokes: DD2, DDS-2, T, "R", and "F" Tablet Presses.
4—Nash Vacuum Pumps: H6, TS7, #2.
25—Chlorimet, Durimet and Duriron Centrifugal Pumps, 1½" to 6".

Partial List of Values — Send for Complete Circular

TEXAS OFFICE: 4101 San Jacinto Street, Houston 4, Texas — Tel.: JAckson 6-1351

BRILL EQUIPMENT COMPANY
35-61 JABEZ ST., NEWARK 5, N.J. Tel.: MArket 3-7420

Oils, Fats and Waxes

crude was maintained at 73c. to 74c. per pound, spot delivery and Parnahyba, 74c. to 75c., same basis. Yellows were quiet and unchanged. No. 1 Ceara was held at $1.05 to $1.07 and Parnahyba, $1.08 to $1.10 per pound, spot, delivery, as to quantity.

Tight supply condition continued to prevail in candelilla spot and for shipment. Stocks on spot were still scarce and small lots of crude moved at 65c. to 70c. per pound, depending upon seller and buyer. Arrivals of 375 bags at New York last week were readily absorbed against former orders.

Demand for beeswax was quiet. Crude and refined grades were held at former levels. Japan wax was inactive and unchanged at 27c. to 29c., per pound, spot, as to quantity.

WIRE US COLLECT!

COPRA PLANT
Still Installed

10—Anderson Super Duo Expellors, Bucket Elevators, Screw Conveyors, Foots Screens, etc.

Excellent Condition

ME MACHINERY AND EQUIPMENT CO.
123 Townsend St. · San Francisco 7, Calif.

FOR SALE:

MIXERS—6 Baker Perkins Size 17, BB, 200 gal. w.c. tilting type, jacketed.
HEAT EXCHANGERS — 12 Foster Wheeler 79 to 250 sq. ft., type 316 SS tubes and crown sheets, some w removable bundles.
CENTRIFUGAL—Tolhurst 20", type 316 SS.
TABLET PRESS — Kux Model 25, Rotary, double action.
SIFTERS—Selectro 3 deck 18" x 4', like new. Rotex Mod. 41, 40" x 120" double deck.
MIXERS, RIBBON—J. H. Day 75 cu. ft., 25 HP GH motor drive.
J. H. Day 36 cu. ft. w 10 HP mtr. & speed red. jacketed for 100 psi.

AARON ARECO EQUIPMENT CO.

SEND US YOUR LIST OF IDLE SURPLUS
AARON EQUIPMENT CO. GLadstone 1-1500 ALL PHONES
9370 Byron Street, Schiller Park, Illinois

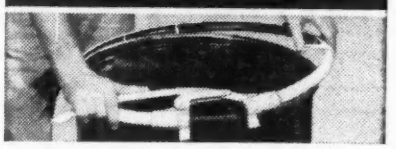
YOUR BEST SOURCE FOR VALUES

1—Stainless Autoclave 30 gal. 2000 psi.
1—Cyclotherm Package Boiler 250 psi, 600# hr.
1—Stainless Ribbon Blender 800#, jacketed.
1—Stokes #38 Drying Cabinet, 16 shelves.
1—Lydon Electrically Heated Dryer 40 shelves, 18" x 36".
4—Stainless Vacuum Receivers 100 to 350 gals.
12—Stainless Jack. Kettles 50 to 100 gals.
5—Stainless Steel Tanks 500 & 600 gals.
10—Stainless Tanks 100 to 300 gals.
1—S. & S. Universal Auger Filler, Stainless Steel.
1—Stokes 90-D Automatic Tube Filler, S.S.
2—Stokes "E" & "F" Single Punch Tablet Presses.
1—Stokes "R" Single Punch Tablet Press.
1—Stainless Steel Condenser 51 sq. ft.
1—Jeffrey Traylor Stainless Steel Vibrating Screen 30 x 68 Double Deck.
1—Day #31 Roball Sifter—Stainless Steel.
1—Raymond 30" Double Whizzer Separator.
1—Rotoclone Size 16 Type W—15 HP.
1—Fletcher Type 316 S.S. 30" Sus. Centrifugal.

Agitators, Conveyors, Fillers, Labelers, etc.

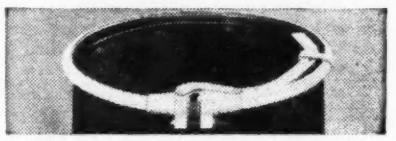
THE MACHINERY & EQUIPMENT CO.
91-93 New Jersey R.R. Ave., Newark 5, N.J.
MArket 2-3103

NOW... double protection with
LEVER-BOLT RINGS
for quick, air-tight closure of full removable-head drums



1. Apply ring to drum.

2. Clamp lever in place, insert bolt and apply nut.



3. Tighten bolt for finished job.

JUST 3 QUICK-EASY STEPS

As shown above, just 3 simple steps give you the most secure drum closure available. The new Drum Parts Lever-Bolt Ring provides not one, but TWO independent means for locking the cover securely on the drum: (1) the lever-lock, for a quick and generally adequate closure, and (2) the nut-and-bolt, providing a positive seal in transit.

Gain simplicity, speed and more security. Specify Drum Parts LEVER-LOCK Rings for your full removable-head drums . . . additional cost is amazingly low.

NEW CATALOG contains descriptive details on all Drum Parts closure devices. Write for your copy today.

DRUM PARTS, INC.
10311 MEECH AVE. • CLEVELAND 5, OHIO

CHEMICAL EQUIPMENT *(Bargains — Quick Sale)*

16—1020 Gals. Baker-Perkins Jacketed Sexagonal Blending Mixers with 5 H.P. Explosion proof Gearmotor Drives. Magnetic Brakes Teflon Lined.

4—1500 Gals. Jacketed Agitated Tanks, all-steel, Motoreducer drives, atmospheric internal pressure, 75# Jacket pressure, ASME—U69 Code.

1—46" dia. X 34' long Accumulator Tank ASME—1300# press.

1—400 Gals. Struthers-Wells Reactor, all Stainless, Jacketed, with 7-½ H.P. Motoreducer Drive.

Also—Stainless Denver Thickener Stainless Door Oliver Filter, 375 Sq. Ft. Stainless Heat Exchanger, Small Stainless Columns, Selas Gas Furnace and many other items.

Call: Mr. Hunt

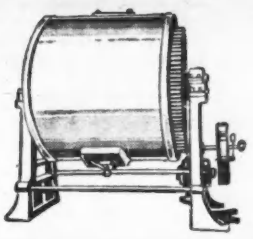
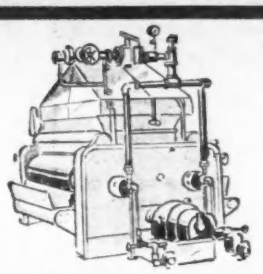
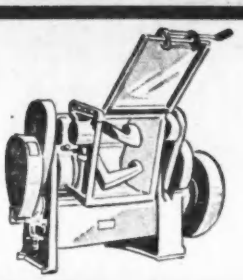
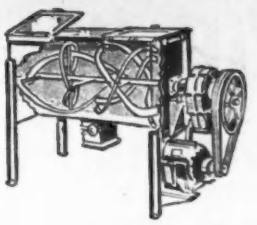
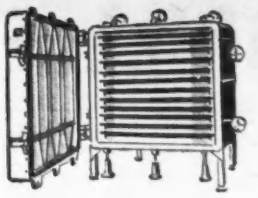
JOSEPH ROSENTHAL'S SONS, INC.
1843 N. Second Street, Phila. 22, Pa. • REgent 9-2816

A SELL-OUT BEFORE MOVING

4—Werner & Pfleiderer 200 gal. jktd., sigma blade Shredders.
1—Ball & Jewell #2 Cutter.
4—Link-Belt Vibrating Screens 4' x 8'.
1—Jeffrey Vibrating Conveyor.
1—30" Sperry Filter closed del., 3-ayo, 39-plates, 40-frames.
1—42" Sperry Filter 40-plates, 41-frames, hyd. closing, open del.
9—Blackburn Smith Pressure Leaf Filters with S.S. Leaves.
1—International Ball Mill, porcelain lined, 48" x 66", 15 H.P. Unibrake Motor, 2-drums balls. Like new.
1—Schutz-O'Neill Pulverizer 22", Style D.
1—Abbe Pebble Mill 5' x 22'.
1—Sparkler Filter 33-S-28, with Scavenger Plate, steam jacketed.
1—2 qt. Sigma Blade S.S. Mixer.
1—250 gal. Kettle, nickel jacket, 300#.
1—Bartlett Hog Mill with 7½ H.P. motor.
1—430 S.S. Tank 3000 gal. vert. ¾ plate, with 2 pc. cover.
2—Vacuum Pumps, Gardner-Denver, 5" bore 4" stroke, with 7-½ H.P. motors.
1—#316 S.S. Reactor 365 gal. jkt.
2—Twin Screw Mixers 120 gal. jkt.
2—Aetna Water Stills 20 gph, new.

Large stock of new and used H.P. Boilers, Tanks, Pumps, Heat Exchangers, Freon Compressors, Stainless Steel & Brass Valves. Advise us as to your requirements.

H. LOEB & SON 4643 LANCASTER AVE., PHILADELPHIA 31, PA.

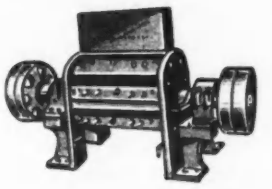






THE WIDEST SELECTION OF CHOICE EQUIPMENT NOW IN STOCK at FIRST MACHINERY CORP.

RENTAL PURCHASE PLAN — TRY IT — THEN BUY IT!

There are many advantages in Renting Equipment and more plants than ever are utilizing the FMC Rental-Purchase Plan; the cost of the equipment is charged to running expense.

The final rental payment completes the outright purchase. Furthermore, besides conserving capital, it permits a thorough trial of the machine under actual working conditions.

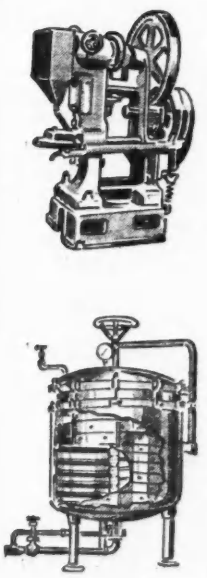


REACTORS and PRESSURE VESSELS

Mojonnier S S Vac. Pans; 3'x10'; 6'x12'
Nickel Clad Reactor; 7'x11'6"; Jktd. Agt.
Struthers Wells Type 316 S S; 1000-2000 Gal.
Pfaudler G1-Lnd; Jktd. Agtd. to 1000 Gals.
Lancaster S S Lined Rotary Jacketed Reactor; 50" Dia. x 17'14" long
Three Stage Continuous Agitated Reactor, 3 Vessels 4'x20' in tandem
Dopp 650 Gal. C.I. Jktd. Agtd. Reactor
250 Gal. Hi-Pressure Forged Steel Reactor, Jacketed and Agitated; 40" x 72"

PLASTIC and RUBBER EQUIPMENT

F-B Late Style 2 Roll Rubber Mills, 14"x30"; 16"x42"; 18"x42"; 22"x60"
Three Roll Calender; 22"x58" complete
Baker Perkins Hv. Duty Mixers to 300 Gal.
Banbury Type "B" Laboratory Mixer
Two Adamson Vulcanizers; 16' long
Abbe Pebble Mills with Motors, Pebbles; 37"x48"; 45"x48"; 60"x72"; 8'x8'
Truck Dryers; 11'x15'x30'; 7'x12'x100'
Automatic Mechanical Dryer; 160' long
Automatic Washer for Latex Pads
Southwark Hydraulic Presses; 36"x36"
Dunning & Boschert Hydraulic Presses 36"x36"
French Oil Mill Presses; 28"x30"
Stokes Aut. Molding Press No. 252; 300 Ton
Extruders: Royle No. 1; Allen No. 2; NRM 1½"
Kux, Stokes & Colton Tablet Presses

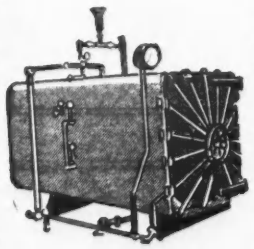


FILTERS and FILTER PRESSES

Shriver and Sperry Filter Presses to 42" in Cast Iron, Stainless, Ni-Resist, Aluminum
Oliver Continuous Rotary Panel Type Vacuum Filters; 8'x8' and 8'x10'
Feinc String Type Rotary Vacuum Filters 6'x6' & 8'x10'; Stainless contacts
Bird Young Rotary Vacuum Filters 4'x4'
Sweetland Pressure Filters No. 2 to 12
Enzinger Vertical Stainless Pressure Filter; 18"x26"; ASME; 24 sq. ft.
Stainless Nutsche Type Filter 6' Dia. x 2'
Bowser Filter with Pump; 2000 GPH; 69 sq. ft.
Enzinger Leaf Type Filter, 48"x57" Tank with 15 leaves; 360 sq. ft. surface

DRYERS and EVAPORATORS

Stokes Rotary Jktd. Dryer; 18"x8'
Stainless Lined Rotary Dryer; 50"x20"
B & S Dbl. Drum Dryer; 28"x60"
Buflovak Dbl. Drum Dryer; 40"x120"
Zaremba INCONEL Dbl. Effect Evaporator
Swenson Multi Effect Long Tube, Film Type Evaporators



CENTRIFUGES and EXTRACTORS

Bird Continuous Conical Horizontal Centrifuges; 18"x24"; S S; Monel
Sharples H2 Nozzlejector; 15 HP
Sharples Monel Model M4 P Centrifuge
DeLaval Type 316 S S Hermetic Separator
Fletcher 12" and 30" S S Centrifugals
Rubber Covered Centrifugals; all sizes

STAINLESS TANKS

10—Heavy Duty 850 Gal. Vertical SS Tanks with agitators; Coned
4—Stainless Horizontal Tanks; 6'x34'; Manhole Type
2—A. O. Smith 11,000 Stainless lined Pressure Tanks; 10'x16'7"

FATTY ACID INSTALLATION SYSTEM

Includes Ni-Resist Still Pots, Monel and Steel Tanks, Stainless Heat Exchanger, Condensers, Receivers, BOILER, Jet and Booster Ejectors, Pumps, Filters and accessories. Send for complete details.

A BATTERY OF
A.T.&M. 60"
TYPE 316
STAINLESS CENTRIFUGALS
CENTER SLUNG SUSP.

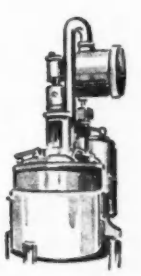
IN STOCK
BRAND NEW
FALCON MIXERS
DOUBLE RIBBON
STEEL OR STAINLESS
ALL SIZES

SEND FOR NEW FIRST FACTS JUST PRINTED

FMC Pays MORE For Your Surplus

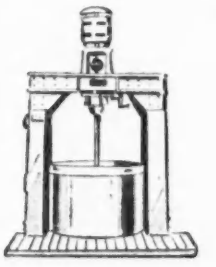
PRESSES TABLET-HYDRAULIC

4544 M1—Stokes Eureka Single Punch Tablet Press; motorized
4897 Z3—F. J. Stokes Model E Single Punch Tablet Press
4847 B2—F. J. Stokes Model T Tablet Press; 13/32" x 1¼"; up to 80 per minute; 2 HP Motor
4717F1—Colton Single Punch No. 4½; 1½" x 1½"; 60 per M.
4847 B1—Colton Model No. 5½ Tablet Press; 3" x 2⅛"; up to 50 per minute; 5 HP Motor
4717F2—Kux Model No. 60A; 30 Ton; 2" x 2½"; 5 HP motor
3673 L30—Colton No. 1 PT Aut. Tablet Triturate Machines 2600 per M
1302 W19 — Colton Rotary #10 — 35 Tablet Press; 800 per M ¾" x 1¾"
4199—Stokes Model RD3 Rotary Tablet Press with 3 HP variable speed motor
2755 R25—French Oil Mill Hydraulic Press; 24" x 36" Curb or Cage Type; 450 Tons with Hydraulic Pump
4723 D1-8—8 HPM Steeping Presses Type 4R with Hydro Radial Pumps; 30 Platens each 20¼" x 24½"; Cylinder 10" x 73"; Ram Travel 70"
3986 K2—Denison 4 Ton Hydraulic Press; Thermo controls; 3 HP Freon; 5 HP
P11-100—Stewart Bolling Hydr. Press 36" x 36"; 22" ram; 15" Daylight; 425 Ton
2016 SB—Laboratory Press 6" x 6"; 30 Ton with Pump



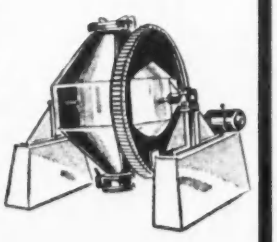
PAINT, INK, VARNISH EQUIPMENT

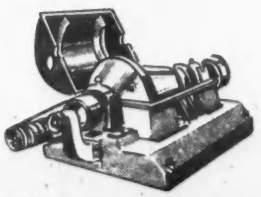
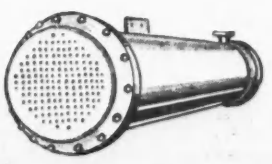
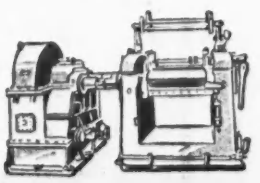
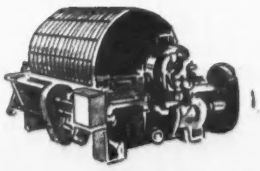
6—J. H. Day 40 Gal. Pony Mixers
2—J. H. Day Hi Speed 3 Roll Mills 14"x30" with 25 H.P. Motors
6—Ross & Kent 16"x40"—3 Roll Mills
2—J. H. Day 200 Gal. Paragon Mixers
30—Pebble & Ball Mills all sizes



MILLS — GRINDERS PULVERIZERS

Abbe Stainless Lab. Ball Mill 9"x18"; motorized
Abbe Jacketed Steel Ball Mills 42"x36" with charge of balls
International Porcelain Lined Ball Mill 8'x8'; 50 HP Motor
Patterson Jacketed Ball Mill 54"x42"; good for Vacuum
Szegvari S.S. Attriter Mill Model 100 S; Jktd. 7½ HP
Gates Tube Mills 5'x22'
Mikro Pulverizers; up to No. 4's
Fitzpatrick Comminuting Mills Stainless Steel; Models C, D, K
Mikro S S Atomizers Model 3 & 6
Williams Hammer Mills to 16"x48"
Williams Ring Roll Lab. Mills, 3 Roll, 10"x3"; complete
Raymond Imp Mills; many models
Bauer 24" Double Runner Attrition Mill with Two 20 HP Motors
American Ring Roll Crusher with 30"x33" Throat; 50 HP Motor



FIRST MACHINERY CORPORATION

209-289 TENTH STREET, BROOKLYN 15, N. Y. • STerling 8-4672

LIQUIDATION

FELDSPAR PLANT
MANCHESTER, CONN.

17—Abbe Eng. #1B 6' x 8' pebble mills, 30 HP motor. drive, dust hoods, silex stone lined.
2—Hardinge 7' x 36" conical pebble mills.
1—Allis Chalmers 6' x 18' pebble mill.
1—Christie 4'6" x 45' long rotary dryer.
1—Symons 3' shorthead cone crusher, 50 HP.
1—Buchanan 13" x 24" jaw crusher, 50 HP.
3—Bucket elevators, up to 50' high.

PHONE — WIRE — WRITE

1—York Freon 12 comp., 7 x 7, 40 HP, 1953.
1—Gardner-Denver air comp., 445 cfm at 100#.
1—1960 sq. ft. horiz. heat exchanger, T316 SS, ASME.
1—Tolhurst 48" susp. centrifugal, T304 SS perf. basket.
2—Sharples #C-20 Super-D-Hydrators, T316 SS.
5—A.T.&M. 40" T304 SS Suspended centrifugals, 40 HP motors. (Solid or perf. basket.)
17—Sharples AS-16V centrifugals, Inconel, vaportite.
3—Sharples #16-NF cent., Non-foam, T304 SS.
2—4' dia. spray dryers, T304 SS, pilot size, elec.
1—Eimco 18" x 24" rotary vac. filter, T304 SS.
1—Niagara #60-20 vert. filter, 57 sq. ft., T304 SS.
1—Niagara 54 sq. ft. vert. filter, T304 SS.
1—Alco 110 sq. ft. vertical leaf filter, T316 SS.
2—Oliver 5'3" dia. x 3' face rotary vac. filter, precoat, T316 SS. ASME 30# pressure housing.
1—Oliver 5'3" dia. x 8' face rotary Vacuum filter.
60—T316 SS heat exchangers & condensers: 1960 sq. ft. down to 30 sq. ft.—All sizes.
1—Buflovak 42" x 120" dbl. drum dryer, ASME 100#.
1—Standard 3' x 23' rotary dryer, ¼" welded shell.
1—Ross 6" x 14" 3-roll hi-speed mill, 5 HP.
3—2750 gal. T316 SS vert. pressure tanks.
1—2500 gal., T316 SS pressure tank, 70# WP.
1—17,650 gal. T316 SS horiz. pressure tank, int. coil.
1—J. H. Day 30 cu. ft. jktd. ribbon mixer.
1—Sprout-Waldron 335 cu. ft. ribbon mixer, UNUSED.
2—Baker Perkins #15, 100 gal. sigma blade mixers.
2—96" dia. Vulcan T316 SS bubble cap columns.
1—Graver 750 gal. T304 SS Kettle, ASME, 10 HP.

65—BAKER PERKINS Size #17 200 gal. JACKETED MIXERS, SIGMA or DUPLEX BLADES.

PERRY EQUIPMENT CORP.
1407 N. SIXTH ST., PHILA. 22, PA.
Phone: POplar 3-3505

PROCESS EQUIPMENT DIVISION

Link Belt 502-16 Roto Louvre Dryer Oil Fired Furnace, Disch. Hood, and Drive.

Vulcan 9'x100'x⅝" shell Rotary Kiln.

Proctor & Schwartz Apron Conveyor Dryer 20 Unit, 10'-2 Tier Stainless Steel.

3 Roll #3036 High Side Raymond Mill Double Whizzer, Exhauster, Piping.

1000 sq. ft. Stainless Steel Condensers with 370-¾"x14'x16 ga. 304 S.S. Tubes.

Buflovac Vacuum Shelf Dryers, 18 Shelves, Condensers, Receivers, and Vacuum Pumps.

Fletcher 30" S.S. Susp. Centrif. Vaportite, Perforated Basket Unloader 10/5 HP.

Monel Tank, 4500 gal., 9'x9'x¼", Closed.

C27 & C20 Sharples Super-D-Hydrator Vaportite 316 Stainless XP Motors.

Filter 30"x30" P&F 36 C.I. Chambers.

30 gal. 316 S.S. Autoclave 1000 PSI Int., 319 PSI Jkt., 1½ HP Agitator.

HEAT & POWER CO. INC.
60 East 42nd St., New York 17, N.Y.
310 Thompson Bldg., Tulsa 3, Okla.

VACUUM PUMPS
1—Beach Russ 250 c.f.m., 10 h.p. mtr.
1—Kinney 110 c.f.m., 5 h.p. mtr.
1—Beach Russ 100 c.f.m., 5 h.p., mtr.

HAMMER MILLS
1—Williams Size E, Type AX, 20 h.p. mtr.
2—Sturtevant #0-18" "open door" 20 h.p. mtr.
2—Jeffrey Size 24x18", Type A2, 30 h.p. mtr.

COLLOID MILLS
1—Premier 8", ni-resist-stellite construction, 30 h.p. geared up motor.
1—Troy triple action Standard #2, colmonoy rotor & stator, 15 h.p. motor.

Ribbon Blenders, Dryers, FitzMill, etc.

BILL WOLF, Inc.
2708 CAROL ROAD UNION, N.J.
MUrdock 6-8883

2—OLIVER PRESS PRECOAT FILTERS 5'3" x 3'—Type 316 S. S.

1—RIBBON BLENDER—100 cu. ft. Stainless Steel, Stuffing Boxes and Roller Bearings.

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4—Ross 100 gallon jacketed double arm mixers.
4—Double spiral ribbon blenders, 1000#, 1200#, 2000#, 7500#.
2—Steel ball mills, 250, 50 gallon.

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Chemicals Off Slightly

—Continued from page 4

ports at $1,576.1 million, about 1 percent above the January level of $1,561.8 million and about 23 percent higher than the February 1959 total of $1,280.1 million.

General imports reached a record height for February when the bureau placed the total at $1,287.8 million. This was about 13 percent above the January total of $1,137.4 million and about 15 percent more than the February, 1959, total of $1,118.3 million. It should be noted that February, 1960, had one more day than February, 1959.

Dixon Finally Moving

—Continued from page 5

process was recently developed by the internationally known Swiss firm of that name. In addition to producing a higher quality acid, the new technique is said to cut maintenance costs.

Besides its Paulsboro operation, the Dixon complex of companies has plants in Newark and stocking stations at Fall River, Mass., and St. Mary's, Ga. The parent firm, Dixon Chemical & Research, Inc., was organized about six years ago.

Parke-Davis Pilgrims

—Continued from page 7

lion would be increased next year "to support our expanded research operations."

Housed at the new laboratories are three of the company's five major research departments: chemistry, pharmacology and clinical investigation.

The five-building complex includes a laboratory for chemistry and pharmacology, an administration building with a 192-seat auditorium, a cafeteria, a library, a high pressure laboratory, a solvent storage building, and a power house.

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2—Baker Perkins Stainless Steel, 2 arm, jacketed, vacuum, hydraulic tilt, 150 gal—40 HP, 100 gal—50 HP.
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SAN FRANCISCO (SUtter 1-5568)—Robert W. Walker Company, 57 Post Street, San Francisco

Sun Naphthalene

—Continued from page 3

Mathieson Chemical Corporation in Sun-Olin Corporation, and with American Viscose Corporation in AviSun Corporation.

According to reports in the trade, Sun has already signed up some 65 to 85 million pounds of business for the prospective—though still unconfirmed—naphthalene unit (OPD 4/18/60). It's believed that the plant will be built at the company's Toledo, Ohio, refinery.

Built by the government in 1942 at a cost of around $30 million, the Louisville facility in its heyday was capable of turning out 87,000 tons of butadiene a year from ethyl alcohol.

The plant has been more or less on the block since 1953. What has stood in the way of a sale to industry has been the government's insistence that the plant be held available to produce butadiene from alcohol.

The economics of such an operation did not appeal to chemical producers and there were no takers—that is, until the most recent offering in December when the property was put up for sale with no strings attached.

—Continued from page 35

Current Market Quotations

Venetian red, 20%, bgs., works lb. .0525- —
25%, bgs., works lb. .0575- —
30%, bgs., works lb. .06 —
35%, bgs., works lb. .0625- —
40%, bgs., works lb. .0675 —
Vetiver oil, Bourbon, cns. lb. 16.50 - 17.50
Haitian, cns. lb. 14.00 - 15.50
Victoria blue toner, molybdated, PMA, 250-lb bbls., dlvd. E. of Rockies lb. 4.50 - 4.95
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55-gal. dms., l.c.l., dlvd. lb. .21½- —
tanks, dlvd. lb. .17½- —
tanktrucks less than 4,000 gal., dlvd lb. 18 - —
Zone 2, 55 gal. dms., c.l., dlvd. lb. .21 - —
55-gal. dms., l.c.l., dlvd lb. .24 - —
tanks, dlvd. lb. .18½- —
tanktrucks, less than 4,000 gals., dlvd lb. .19 - —
Zone 1 is all continental US except zone 2. zone 2 comprises Ariz., Calif., Idaho, Mont., Nev., Ore., Utah and Wash.
Vinyl n-butyl ether, tech., dms., l.c.l. works lb. .50 - —
Vinyl chloride monomer tanks, works lb. .125 - —
Vinyl ether USP, anesthesia, bots., 50cc hospitals bot 1.12 - —
bots., 75cc. hospitals bot 1.56 - —
Vinyl ethyl ether tech. dms., c.l., works lb. .29¼- —
dms., l.c.l., works lb. .30 - —
tanks, works lb. .27¼- —
Vinyl propionate monomer, dms., c.l. dlvd lb. .49 - —
dms., l.c.l. same basis lb. 50 - —
tanks, same basis lb 47 - —
Vinyl trichloride (see Trichloroethane)
2-Vinylpyridine, 10 dms. to tanks, works lb 1.20 - —
1 to 9 dms., works lb 1.35 - —
tanks, works lb. 1.15 - —
Vinyltoluene dms. c.l. f.o.b. works. lb. .16½- —
dms., l.c.l., same basis lb. .18½- —
tanks, f.o.b. dest. frt. prepaid lb. .14 - —
Viosterol, in nat. vegetable oil, 1,000,000 D units per gram bots., lots of 10 billion USP units 1,000,000 units .02½- —
Virginia type red, bbls. works lb 1.40 - —
Vitamin A acetate, syn., cryst., beads 500,000 A units per gram gram .07¼- —
Vitamin A acetate, dry, 500,000 units per gram, kilo lots kilo 65.00 - —
325,000 units per gram, same basis kilo 43.88 - —
250,000 units per gram, same basis kilo 33.75 - —
Dry vitamin A acetate in less than kilo lots, $1.25 to $2.50 per kilo higher.
Vitamin A, liq. in oil, 1,000,000 A units per gram 1,000,000 A units .09½- —
Vitamin A palmitate, liq., 1,000,000-1,800,000 A units per gram 1,000,000 units .09½- —
1,000,000 A units per gram, 1,000,000 units .09½- —
Vitamin B1 (see Thiamine hydrochloride).
Vitamin B2 (see Riboflavin and Yeast)
Vitamin B12, cryst., USP (cyanocohalamin) 1-50 grams, vials, tons gram 120.00 - —
0.1% vitamin B12, USP, adsorbed on gelatin 100 and 500-gram bots. on 1-5 kilo dms. gram 1.43 - —
0.1% vitamin B12, USP adsorbed on resin, 100 and 500-gram bots., 1-5 kilo dms. gram 1.43 - —
Vitamin B12, oral grade solids in containers of 1 and 10 gram of B12 activity gram 110.00 - —
0.1% trituration of cryst., B12 with dicalcium phosphate or mannitol, 1-10 kilo 138.00 - —
Vitamin B12, 0.1% cobalamin concentrate NF, adsorbed on resin, 500-gram bots., 1-5 kilo dms., frt. alld gram 1.15 - —
0.1% cobalamin concentrate in gelatin, 1-10 kilo dms., frt. alld gram 1.15 - —
Vitamin C (see Ascorbic acid)
Vitamin D (see Codliver and Fish-liver oils, Calciferol and Viosterol).

Vitamin D, dry, 850,000 units per gram, kilo lots kilo 43.50 - —
850,000 units per gram less than kilo lots kilo 45.00 - —
Vitamin E (see a-Tocopherol) and Wheat germ oil)
Vitamin G (see Riboflavin).
Vitamin H (see Biotin)
Vitamin K, active (see Menadione).
Vitamin K1 25 gram bots gram 4.50 —
Violet methyl toner (see Methyl violet toner)
VM&P naphtha (see Naphtha, VM&P, petroleum).

W

Wahoo root bark, bls. lb. 2.00 - 2.25
Warfarin, 0.5% dms. 50-lb. lots, dlvd lb 1.95 - —
dms. 25-49-lb lots, New York or Chicago lb 2.05 - —
dms. 5-24-lb lots, New York or Chicago lb 2.15 - —
Watchung-type reds bbls lb 1.95 —

WAXES

Wax quotations are listed individually. For example, prices on Wax, carnauba, may be found in the C's under Carnauba wax.

Wheat germ oil, 5-gal dms gal 12.25 —
White lead (see Lead, white).
White mineral oil (see Mineral oil, white)
White pine bark, rossed, bls lb. .21 - .22
White precipitate USP powd dms. lb 6.55 —
Whiting (see Calcium carbonate)
Wild cherry bark, thin, nat., bls lb. .22 —
Thin, rossed, bls lb. .22 Nom.
Wintergreen oil, USP, nat., northern, cns lb 6.35 17.50
USP, nat., southern, cns lb 3.75 7.00
Wintergreen oil, syn (see Methyl salicylate)
Witch hazel bark, bls lb 16 17
Witch hazel leaves, bls. lb. .26 .30
Wollastonite fine bgs. c.l., works ton 59.50 —
bgs., l.c.l., ex whse ton 56.00 —
Medium, bgs., c.l., works ton 57.00 —
bgs., l.c.l., ex whse ton 44.00 —
Wood alcohol (see Methanol).
Wood oil (see Tung oil)
Woolfat, crude (see Degras).
Woolfat, USP (see Lanolin)
Wormseed, Levant, bgs lb 2.50 —
Wormseed oil (see Chenopodium oil, NF)
Wormwood oil, cns lb 4.75 5.00

X

Xylene, coaltar, indust., tanks, works
Bethlehem, Pa. gal 29 —
Birmingham dist. gal 29 —
Chicago dist. gal 28½ —
Cleveland dist. gal 29 —
Geneva, Utah gal 29 —
Johnstown, Pa. gal 29 —
Lackawanna, N. Y. gal 29½- —
Lone Star, Tex. gal 27 —
Lorain, Ohio gal 29 —
Middletown, Ohio gal 30 —
Minnequa, Col. gal 29 —
Philadelphia dist. gal 29 —
Pittsburgh dist. gal 29 —
Sparrows Point, Md. gal 29 —
Terre Haute, Ind. gal 29 —
Youngstown, Ohio gal 29 —
Xylene, petroleum, indust., tanks, f.o.b. works
Bayonne, N. J. gal 29 —
Baytown, Tex. gal 27 —
Charleston, S. C. gal 29 —
Chicago, Ill. gal 28½ —
Detroit, Mich., dlvd. gal. .27½- .29
Houston, Tex. gal 27 —
Philadelphia, Pa. gal 29 —
Providence, R. I. gal 30 —
Sewell's Point, Va. gal 28 —
Wood River, Ill. gal 28½- —
m-Xylene, 95%, dms., c.l., frt. alld. lb. .25 - —
dms., l.c.l., frt. alld lb. .26 - —
tanks, frt. alld. lb. .23 - —
o-Xylene, dms., c.l., works lb. .08 - —
dms., l.c.l. works lb. .09 - —
tanks, works lb. .06 - .06½
p-Xylene, dms., c.l., works lb. .20 - —
dms., l.c.l., works lb. .21 - —
tanks, frt. alld. lb. .1645- —

Xylenol, cryst., 45°-47° C., m.p., dms., l.c.l., works lb. .33 - —
56°-58° C., m.p., dms., l.c.l., works, frt. equald lb. .33 - —
Xylenol, cryst., 60°-62° C., m.p., dms., l.c.l., same basis lb. .40 - —
Xylenol fraction, b.r. 7°-9° C., dry above 227° C. dms., c.l., same basis gal 1.25 - —
dms., l.c.l., same basis gal 1.30 - —
tanks, same basis gal 1.05 - —
b.r. 7°-9° C., dry at or below 227° C., dms., c.l., same basis. gal 1.35 - —
dms., l.c.l., same basis gal 1.40 - —
tanks, same basis gal 1.15 - —
2,4-Xylidine, tech., dms. frt. alld. lb. 1.15 - —
2,5-Xylidine, tech., dms. frt. alld. lb. 1.20 - —
Xylidines, mixed, o-m-p, dms., c.l., or t.l. works lb. .39 - —
dms., l.c.l., same basis lb. 40 - —
tanks, same basis lb .38 - —

XYLOL

Xylol quotations, both coaltar and petroleum, may be found under Xylene.

Y

Yara yara oil, cns. lb 2.15 - 3.05
Yeast, brewers, debittered, Usp. Saccharomyces dlvd lb .27 - —
dry, USP, 50 int'l B units per gram, 100-lb. dms lb. .47 - —
USP 80 int'l B units per gram, 100-lb. dms lb .52 - —
USP, 200 Int'l B units per gram, 100-lb. dms lb. .56 - —
USP, 300 Int'l B units per gram, 100-lb. dms lb. .60 - —
Torula USP dlvd lb .18 - —

YELLOW PIGMENTS

Yellow pigment quotations are listed individually. For example, prices on Yellow, benzidine, may be found in the B's under Benzidine yellow.

Yerba santa leaves, bls lb. .40 - .45
Ylang-ylang oil, Bourbon, bots lb 7.00 - 22.00
extra, bots lb 28.00 - 33.00
Yohimbine hydrochloride, bots., tins oz. 3.75 4.25

Z

Zein, bgs., 36,000-lb. lots or more, bgs., 500-lb. lots or more dlvd. lb. .343 —
bgs., smaller lots, dlvd lb. .373 —
Zinc acetate, NF, VIII, dms lb .53 —
Tech., dms, l.c.l. works lb .29¾- —
Zinc borate, bgs., 1,000 lbs. or more, works lb. .25 - —
bgs., less than 1,000 lbs. same basis lb. .27 - —
Zinc chloride, NF, gran., dms lb .42 - —
NF, precip., powd., dms lb. .26 - —
Tech., soln., 50% dms., c.l., works, 100 lbs 5.80 - —
dms., l.c.l., works 100 lbs 6.40 - —
tanks, works 100 lbs 5.15 - —
fused, dms., c.l., works 100 lbs. 10.70 - —
dms., l.c.l., works 100 lbs. 11.20 - —
gran., fib., dms., c.l., works, 100 lbs. 11.45 - —
fib. dms., l.c.l., works 100 lbs. 11.95 - —
Zinc chromate, bbls., dlvd lb .29 - —
Basic, bbls., dlvd lb. .34 - —
Zinc cyanide, dms., 1,000-lb. lots or more, works lb .55 - —
dms., smaller lots, works lb. .57 - —
Zinc dust, comt., bbls., c.l., works, lb. .17 - —
Pigment, bbls., c.l., works lb. .16½- —
bbls., l.c.l., works lb. .18¼- —
Zinc fluoride, bbls., works lb. .49 .50
Zinc hydrosulfite, dms., c.l., frt. alld lb. .21½- —
dms., l.c.l., frt. alld lb. .23½- —
Zinc metal, prime western, slabs, E. St. Louis lb. .12½- —
Prime western, slabs, New York, lb. .13 - —
Zinc naphthenate, liq., 8% Zn., dms., frt. alld lb. .27 - —
10% Zn., dms., frt. alld lb. .33 - —
Zinc nitrate, tech., cryst., bbls., works lb. .20 - —
Zinc oxide, pigment, American process, lead-free, bgs., c.l., frt. alld lb. .14¼- —
bgs., l.c.l., 10 tons or more, same basis lb. .15 - —
bgs., l.c.l., smaller lots, same basis lb. .15½- —
leaded, 35% bgs., c.l., mills, frt. alld lb. .15⅝- —
bgs., l.c.l., 10 tons or more, same basis lb. .15⅞- —
leaded, 50% bgs., c.l., same basis lb. .15¾- —
bgs., l.c.l., 10 tons or more, same basis lb. .16¼- —
USP, gran., dms lb .26 —
French process, green seal, bgs., c.l., mills, frt. alld lb. .16¼- —
bgs., l.c.l., 10 tons or more, same basis lb. .16¾- —
bgs., l.c.l., smaller lots, same basis lb. .17¼- —
red seal, bgs., c.l., same basis, lb. .15¾ —
bgs., l.c.l., 10 tons or more, same basis lb. .16¼ —
bgs., l.c.l., smaller lots, same basis lb. .16¾- —
white seal, bgs., c.l., same basis lb. 16¾ —
bgs., l.c.l., 10 tons or more, same basis lb 17¼ —
bgs., l.c.l., smaller lots, same basis lb. .17¾- —
Zinc oxide, USP, dms., c.l., frt. alld. lb. .18¼ —
dms., l.c.l., 10 tons or more, same basis lb. .18¾- —
dms., l.c.l., smaller lots, same basis lb. 19¼ —
Zinc phenolsulfonate, NF, gran., dms lb. 45 48
NF, powd., dms lb. 48 49
Zinc resinate, precip., 7.2-7.6% Zn., dms., frt. alld lb. .40¼- —
Zinc silicofluoride, dms., works lb 12½ 14
Zinc stearate, tech., USP, ctns., c.l., lb 41 —
etns., l.c.l. lb. 42 46
Zinc sulfate, powd., monohydrate, 36% Zn., bgs., c.l., dlvd. E 100 lbs. 8.75 —
bgs., l.c.l., dlvd E 100 lbs. 9.75 —
Zinc sulfate in bbls 40c. higher.
Zinc sulfide, pure, bgs., c.l., dlvd lb .2530- —
Zinc undecylenate, dms lb. 2.00 - —
Zinc yellow (see Zinc chromate).
Zinc-ammonium chloride, ogs., c.l., works 100 lbs. 10.25 —
bbls., c.l., works 100 lbs. 10.85 —
bbls., l.c.l., works 100 lbs. 11.35 —
Zinc-formaldenyde sulfoxylate, basic, 300-lb. dms., frt. alld lb .26 —
Normal, 250-lb. dms. frt. alld lb. .52 —
Zircon (G), gran., bgs., c.l., works, lb. .03½ —
bgs., 5 tons to c.l., works lb. .03⅝- —
bgs., 1 ton to 9,999-lb. lots, works, lb .04 —
bgs., smaller lots, works lb. .06½- —
Zircon (G), milled, bgs., c.l., works, lb. .04½- —
bgs., 5 tons to c.l., works lb. .04⅝ —
bgs., 1 ton to 9,999-lb. lots, works lb .04¾ —
bgs., 500-1,999-lb. lots works lb .07½- —
Zircon (G) in barrels 1c. higher
Zirconium acetate, soln., 13% ZrO_2, dms., c.l., 30,000 lbs. min., works lb .23 —
Zirconium hydride, powd., electronic grade, dms., works lb 14.00 - 15.00
Zirconium oxide, CP, white, grd., bbls. or bgs., works lb 1.50 —
Electric-fused lump, bgs., 500 to 1,999-lb. lots, works lb. .48½- —
bgs., smaller lots, works lb. .51 - —
milled, bgs., c.l., works lb. .62 - —
bgs., 5-ton lots, works lb. .62½- —
bgs., 1-ton to 9,999-lb. lots, works lb .63½ —
bgs., 500 to 1,999-lb. lots., works lb. .64 - —
bgs., smaller lots, works lb. .66 - —
Glass polishing grade, 94-97% ZrO_2, bgs., works lb. .55 .65
Opacifier grade 85-90% ZrO_2, bgs., lb. .27 .50
Stabilized oxide 91% ZrO_2, milled, bgs lb. .62 .85
Zirconium oxychloride, cryst., ctns., 5-ton lots, works lb. .37½ —
bgs., l.c.l., smaller lots, same basis lb. .16⅝- —

Trade Name Chemicals

—Continued from page 49

"51W" are strong acid resins while **"Dowex 1,2,11"** and **"21K"** are strong base resins and **"Dowex 3"** is a weak base resin. Commercial weak acid resins contain carboxylic groups at their functional sites and are analogous to weak base resins in most respects, the company says. They are operable only in the pH range above 7 and have limited use in water treatment. However, they are said to be very useful in efficiently removing basic materials from process streams. One of their largest uses has been in the separation of antibiotics from fermentation broths.

"Dowex 50" has long found application in water softening and when used in conjunction with an anion exchanger in the hydrogen cycle, complete dermineralization is accomplished. In addition, the material serves in such diverse uses as pharmaceutical production, chromatographic separations, metals recovery and deionization of glycerine.

Strong base resins of commercial importance all incorporate a quaternary ammonium type of structure as typified by the **"Dowex 1, 2, 11, and 21K"** resins. These anion exchangers are further divided into Type 1 and Type 2 resins, the difference being that in a Type 2 resin one of the three methyl groups on the nitrogen atom is replaced by an ethanol group. **"Dowex 2"** is a general purpose Type 2 resin and as such is less stable than Type 1, but is more efficiently converted to the hydroxide form. **"Dowex 1"** and **"21K"** are Type 1 resins, the latter being the newest of this anion exchanger series. It offers the advantages of **"Dowex 1"** plus an increased hydroxide regeneration efficiency of approximately 15-20 percent, Dow reports. The material was originally developed for application where organic fouling is a major problem and is currently the resin of choice in dual and mixed bed demineralization applications, according to the company.

The need, in recent years, for better methods of separation and recovery of transition and rare earth metal concentrates has led to a relatively new hydrometallurgical process known as solvent extraction. In this field, General Mills produces and markets in commercial quantities, a high molecular weight, symetrical trialkyl tertiary amine tradenamed **"Alamine 336."** The company reports that the versatility of the solvent extraction exchange process is demonstrated in a commercial application today in which **"Alamine 336"** is used to extract uranium and vanadium simultaneously from the same liquor. Solvent extraction is reported to be currently employed in the recovery of uranium from about 50 percent of the total uranium ores in the US leached with sulfuric acid. In addition to the extraction of uranium from acid leach liquors, the General Mills product can be used for many other separations.

Surfactants

Air Reduction Chemical Company has announced a price increase in one of the company's extended list of **"Surfynol"** nonionic surfactants and defoamers. **"Surfynol 102"** is newly quoted at $1.50 in a 140-lb. net fiber drum. The price on 20-lb. drum is $1.55 per pound and 5-lb. container is $1.95 per pound. The producer reports that the advance reflects a series of increases in a chief raw material used in manufacturing this product.

Wherever **"Surfynol 102"** may be used as a defoamer and pigment dispersant in latex paint formulations, Air Reduction suggests that the liquid form, **"Surfynol 104E"** be evaluated. The latter is priced at 50c. per pound in 450-lb. net fiber drum and 52c. in a 250-lb. drum.

The company also reports addition of **"Surfynol 104TBP"** to its product line. The material contains 50 percent by weight active **"Surfynol 104"** (di-tert-acetylenic glycol) in tributyl phosphate. The product has found application as a defoamer for aqueous systems, particularly color coatings in paper manufacture. **"Surfynol 104"** is said to give increased wetting with other surface active agents and defoaming in aqueous systems. The material is also characterized as a rinse-aid surfactant.

Dow In Center Ring

—Continued from page 7

ler and Imperial divisions of Chrysler Corporation.

Dobeckmun is also exhibiting a wide range of packaging materials. A large mural covering the back wall of the display booth depicts the development of a nationally-known package from its raw material conception to finished product.

Preceding the program of events, the Advertising Club of Washington last week honored Dr. Leland I. Doan, president of Dow, at a luncheon. He was presented with an achievement award by Frederick H. Mueller, US secretary of Commerce, who was main speaker for the occasion.

The exhibition got under way April 21 and will close this Saturday (April 30).

Bids Wanted

Calcium Carbide Tech., 250,000 lbs., Formula: CAC2 Fed Spec O-C-101A and Amend. 1 dated March 6, 1951. Bid IFB 102-237-60, May 9. Supply Officer, Code 530, Naval Shipyard, Portsmouth, N. H.

Coating Compound, 11,200 gals., Spec MIL-C-15203B, Bid IFB-155-3206-60B, May 3, General Stores Supply Office, 700 Robbins Ave., Philadelphia 11, Pa.

Lacquer, 20,124 qts., Spec MIL-L-7178A, amend. 1 (QPL) Bid IFB 155-3175-60B, May 2, General Stores Supply Office, 700 Robbins Ave., Philadelphia 11, Pa.

Paint, Titanium, lead-zinc and oil exterior, ready mixed, white, five gallon-lug-cover-steel-pail. Fed Spec TT-P-102. Bid IFB F166-60B, May 6, Purchasing and Contracting Branch, Base Material Battalion, Second Force Service Regiment, Building 1211, FMF Camp Lejeune, N.C.

Quicklime, approx. 900 tons, for water purification. In accord with A.S.T.M. C-53 Specs., for the period July 1, 1960, to June, 1961. Deliveries to the US Navy Pumping Station, Florida City, Fla., requests for invitations should not be sent after April 18. Bid IFB 200-54-60, May 9. Supply Department (200) US Naval Station, Key West, Fla., Attn: code 554.

Thinner, Turpentine, indefinite quantity, in accord. with Fed Specs TT-T-306 and amend 2, TT-T-266B, TT-T-2891A and Amend. 1, TT-T-801A. Term contract for the period af date of the award through April 30, 1961. Bid IFB-CH-FT-262, May 10. General Services Administration, Region 5.575 US Courthouse, Business Service Center, 219 S. Clark St., Chicago, 4, Ill.

Thichloroethylene, 37,500 gals., Spec. Fed. O-T-634A, Type II. Bid IFB 155-3170-60B, May 2, General Supply Office, 700 Robbins Ave., Philadelphia 11, Pa.

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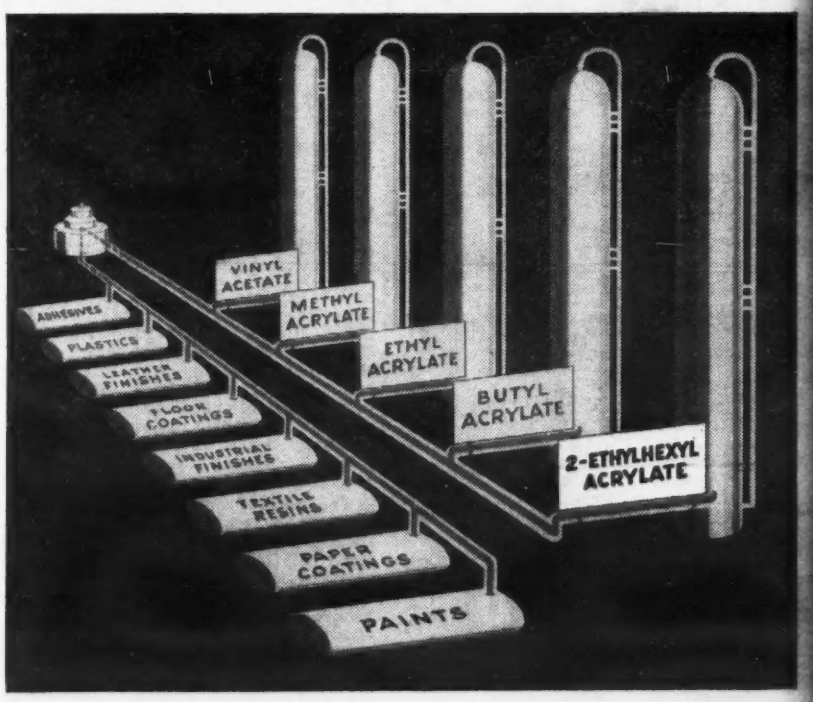

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